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Projektkennblatt
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Antragstitel	**Biodiversitätsschutz im Bulgarischen Balkangebirge**
Stichworte	Biodiversität, Artenschutz, Naturschutz, Balkangebirge, Bulgarien

Laufzeit	Projektbeginn	Projektende	Projektphase(n)
5 Jahre	**1.4.2008**	**31.12.2013**	**2**
Zwischenberichte	1.1.2009	1.1.2010	1.1.2011
	1.1.2012	1.1.2013	
Abschlußbericht		31.12.2013	

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National Park Central Balkan
Naturpark Vratchanski
Naturpark Sinite Kamani
Community of Kotel (Administration of Strict Reserve Kotel)
Environmental Partnership Foundation Bulgaria

Zielsetzung und Anlaß des Vorhabens

Ziel des Vorhabens ist es, die Gesamtsituation des Biodiversitätsschutzes in dieser wichtigen Region in Bulgarien zu verbessern. Das Projekt hat sich folgende Ziele gesetzt, die in Einzelmaßnahmen erreicht werden sollen:
Verbesserung der ökologischen Integrität der bestehenden Schutzgebiete
Verbesserung der Akzeptanz der Schutzgebiete und der dort lebenden Wildtiere
Erhöhung der der Attraktivität der bestehenden Schutzgebiete für potentielle Besucher.

Diese Ziele sind in Form von Modulen, die aufeinander aufbauen und sich sinnvoll ergänzen erreichbar:

- **Verbesserung der ökologischen Integrität:**
  - Vernetzung der vorhandenen Schutzgebiete durch Korridor- und Erweiterungsplanung für ausgewählte Zielarten;
  - Kapazitätsverbesserung der bestehenden Schutzgebiete Naturpark Vratchanski Balkan, Naturpark Sinite Kamani, des Nationalparks Zentraler Balkan und des strengen Reservates Kotel geschehen;
  - Ausbildungseinheiten und Wokshops für Mitarbeiter der Schutzgebiete in der Bekämpfung von Vergiftungsfällen und in der Wildererbekämpfung;

- **Verbesserung der Akzeptanz:**

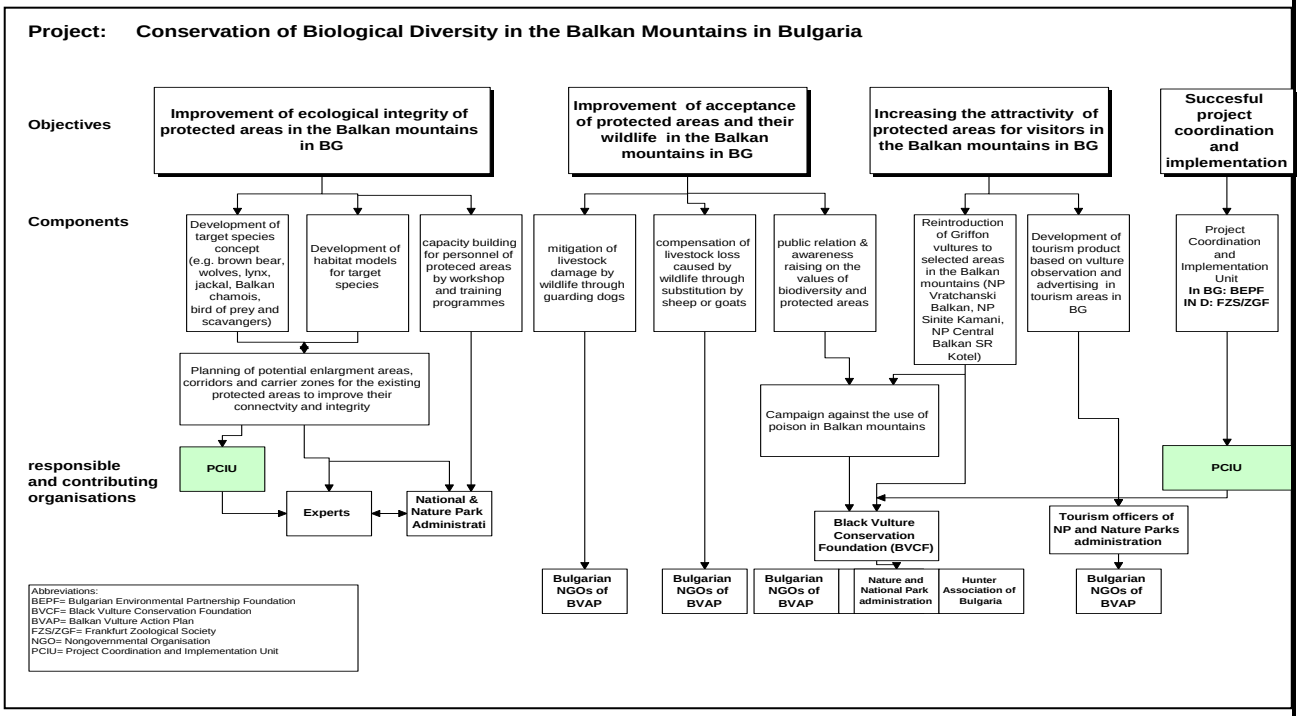
- Unterstützung der ländlichen Bevölkerung in der Abwendung von Wildschäden.
- Kooperation mit der ländlichen Bevölkerung bei der Beseitigung von Haustierkadavern.
- Einer umfassenden Öffentlichkeitsarbeit, sowie Bildungs- und Erziehungsaktivitäten in den Informationsstellen der Schutzgebiete und den Infozentren der beteiligen Verbände.

➢ **Erhöhung der Attraktivität der Schutzgebiete**

- Wiederansiedlung von Gänsegeiern in den Schutzgebieten als wichtiges Element für entsprechende touristische Angebote für die Schutzgebiete.
- Entwicklung touristischer Produkte in Form von Führungen, Wanderungen, Infoveranstaltungen etc., die in Zusammenarbeit mit den Verwaltungen der Schutzgebiete entwickelt werden und diese in den touristischen Zentren Bulgariens (Schwarzmeerküste) beworben werden. Hierdurch soll ein dauerhafter Einkommenstransfer in die Schutzgebiete erzeugt werden, der dann die in Angriff genommen Schutzmaßnahmen finanziell absichert

Darstellung der Arbeitsschritte und der angewandten Methoden

Struktur des Projektes:



x **Projektphasen und Meilensteine**

Projektphase	Meilenstein
Vorbereitungsphase Monate 1 bis 8	Project Coordination Unit (PCIU) installiert Identifikation der Projektpartner – >Festlegung der individuellen Beiträge entsprechend des Rahmenplanes -> Projektvereinbarungen geschlossen
	Identifikation und Festlegung des Zielartenspektrums des Projekts Monitoringkonzept auf der Basis der Zielarten erarbeitet.
	Habitatmodelle für Zielarten erarbeitet und in GIS eingearbeitet.
	Bedarf für Kapazitätsbildung der Schutzgebietsverwaltung identifiziert und Aus- und Fortbildungsprogramm geplant
	Kampagnenkonzept für Öffentlichkeitsarbeit zur Akzeptanzschaffung für Schutzgebiete entwickelt
	Machbarkeitsstudien zur Wiedereinbürgerung der Gänsegeier aktualisiert und vervollständigt
	Tourismusarbeitsgruppe eingerichtet und Konzeption zur naturschonenden Tourismusentwicklung erarbeitet.
Umsetzungsphase Monate 9 bis 60	Startworkshop zur Projektumsetzung
	Monitoring liefert Daten für Zielarten zur Bewertung der Entwicklungen in den Parks
	Umsetzung der Öffentlichkeitskampagne
Umsetzungsphase Monate 9 bis 57	Bau der Freisetzungsgehege für Gänsegeier Sammeln der Gänsegeier in Spanien in der Sammelstation Transport der Geier nach Bulgarien Verbringung der ersten Geiergruppe nach Kotel (September 2009)

	Verbringung weiterer Geiergruppen (nach Verfügbarkeit) nach Vratchanski Balkan, Sinite Kamani und NP Zentraler Balkan (März-Mai 2010)
	Fertigstellung des Tourismusproduktes „Geier im Balkangebirge“ mit entsprechenden Werbematerialien. Aktuell wird eine nationale Vermarktung des Tourismusangebotes priorisiert. Eine internationale Vermarktung muss auf der Zeitachse verschoben, bis die ersten freigesetzten Geier in den Zielgebieten beobachtbar sind und die nationale Vermarktung erfolgreich war und somit entsprechende Erfahrungswerte erzeugt werden konnten.
	Konzeption für Verbesserung der Schutzgebiete erarbeitet
	Programm für Schutzhundezucht aufgebaut und Schutzhunde sind verfügbar Programm für Wildschadenkompensation aufgebaut und arbeitsfähig
	Freilassung der ersten Geiergruppe (Kotel) nach erfolgter positiver Eingewöhnung (experimentelle Freilassung, November 2009) Freilassung weiterer Geiergruppen entsprechend positiver Eingewöhnung Vratchanski Balkan (geplant Oktober-November 2010) Sinite Kamani (geplant Oktober- November 2010) Zentraler Balkan (geplant Frühjahr 2011) Weitere Gänsegeiertransporte aus Frankreich und Spanien für 2012 geplant
	Öffentlichkeitsarbeit parallel zu Freilassungen Werbung für die Geierattraktionen, Angebote an Touristen zur Geierobservation entwickelt und umgesetzt.
Endphase Monate 57 bis 60	Planung zur Erweiterung der NPs vorgelegt und Akzeptanz auf lokaler, regionaler und nationaler Ebene erzeugt. In Gegensatz zu den optimistischen Annahmen bei der Projektvorbereitung, hat sich herausgestellt, dass politisch eine Schutzgebietserweiterung derzeit kaum durchsetzbar ist. Auch bei bester Begründung und Planung ist die bulgarische Regierung derzeit nicht bereit über die NATURA 2000 Gebietskulisse hinaus Erweiterungen bestehender Schutzgebiete vornehmen zu wollen. Abschlussveranstaltung und Übergabe der Geierkolonien an die Schutzgebietsverwaltung. Monitoringprogramm durch Schutzgebietsverwaltungen und verbände organisiert und umgesetzt

Projektkomponenten

- **Zielartenkonzept und Monitoring**
  Erarbeitung eines für die großflächige Raumebene des Balkangebirges geeignetes zoologisches Zielartenkonzept. Die Erarbeitung des Zielartenkonzeptes baut auf den bereits realisierten Projekten in dieser Region zum Schutz der vier europäischen Geierarten sowie zur Identifikation von Braunbärenkorridoren auf. Für die Braunbären der Region gibt der bereits erarbeitet Bärenmanagementplan für Bulgarien die Implementierungsschritte vor. Zu klären bleibt jedoch inwieweit diese Maßnahmen geeignete Synergien für etwa Wolf und Luchs schaffen können. Maßnahmen für eben diese Arten müssen auch in einen logischen Zusammenhang mit dem Bärenmanagement gestellt werden. Ein entscheidendes Element bei der Umsetzung des Zielartenkonzeptes ist die langfristige Beobachtung der Populationstrends bei den identifizierten Zielarten. Jedoch fehlt derzeit ein positiver Luchsnachweis im Zielgebiet, so dass diese Art als Zielart ausfällt. Wölfe sind wie Braunbären durchaus als Kulturfolger zu sehen und profitieren von Maßnahmen, die auf den Schutz der Braunbären abheben gleichermaßen. Daher ist es notwendig bereits zu Beginn aller Maßnahmen den Rahmen für das Monitoring festzulegen und in bestimmten Zeitabständen den Bestand der Zielarten zu kontrollieren. Wichtig ist auch, dass man sozusagen den Status quo vor Maßnahmenbeginn ermittelt und somit eine verlässliche Ausgangslage hat. Im Fall des Luchs kann dies entfallen, da es derzeit keinen gesicherten Bestand im Zielgebiet gibt. Das gleiche gilt für Gänsegeier. Auch hier ist der Bestand komplett erloschen. Zielgruppe für dieses Modul sind die Experten aus Verwaltung und Verbänden.
- **Habitatmodellierung für die ausgewählten Zielarten**
  Durch Habitatmodellierung für die ausgewählten Zielarten wird zunächst die theoretische Eignung der Gebirgslagen als Lebensraum für die ausgewählten Zielarten ermittelt und in einem geografischen Informationssystem GIS aufbereitet. Diese theoretischen Grundlagen müssen dann im Feld überprüft und die Habitatmodelle entsprechend ergänzt bzw. verändert werden. Zielgruppe bei diesem Modul sind die Schutzgebietsmitarbeiter wie auch die Verbändevertreter, die sich mit dem Monitoring der Zielarten beschäftigen wollen.
- **Verbesserung der bestehenden Schutzgebiete**
  Durch Supraposition mehrere Habitatmodelle können kritische Bereiche im Gebirgskamm herausgearbeitet werden, die dann eine Leitlinie für die physische Vernetzung geeigneter Teillebensräume ergeben. Ergebnis dieses Arbeitsschrittes ist dann ein Vorschlag zur Ausweisung von Vernetzungshabitaten bzw von Erweiterungen bestehenden Schutzgebieten. Wichtig hierbei ist die Berücksichtigung des Migrationsverhaltens bestimmter Arten, die Identifikation bestimmter Wildwechsel, die in großer Stetigkeit oder Häufigkeit von den Zielarten genutzt werden. Zielgruppe bei diesem Modul sind die lokalen wie auch na-

tionalen Entscheidungsträger. (Siehe anliegende Publikation)

- **Wiederansiedlung von Gänsegeiern**

  Im Rahmen von Machbarkeitsstudien wurde der Nachweis erbracht, dass eine Wiederansiedlung von Gänsegeiern in den bestehenden Schutzgebieten Vratchanski Balkan, Zentraler Balkan, Sinite Kamani und Kotel große Aussicht auf Erfolg habe kann. Die Faktoren für den Verlust der Arten wie Anwendung von Giftködern gegen Wölfe sind nicht mehr existent. Es wurden keine Vergiftungsfälle mehr in den letzten sechs Jahren in dieser Region nachgewiesen. Wölfen selbst darf nicht mehr nachgestellt werden und die Tötung von Wölfen durch Giftköder ist verboten. Der Bestand an natürlichen Huftieren ist gut. Ebenso der Bestand an Haustieren wie Schafe und Ziegen, ist in den angrenzenden landwirtschaftlich genutzten Bereichen des Balkangebirges sehr gut. Damit ist die Voraussetzung gegeben, dass aktive Wiederansiedlungen erfolgreich sein können. Die zur Wiederansiedlung kommenden Gänsegeier stammen aus den starken Populationen Spaniens (22.000 Brutpaare) und dort aus den Tierauffangstationen. Es sind keine aktiven Fangaktionen geplant, sondern lediglich Translokationen von Geiern der Auffangstationen. Hierbei handelt es sich meist um Tiere, die verunfallt waren und zur Rehabilitation in die Tierpflegestationen gebracht wurden. Nach vollständiger Genesung können die Tiere wieder in die Freiheit entlassen werden. Dies soll nach dem Willen der spanischen Behörden jedoch nicht in Spanien selbst erfolgen. Genetisch gibt es keine signifikanten Unterscheide zwischen den Gänsegeiern des westlichen und des östlichen Mittelmeerraumes. Eine aktive Wiederbesiedlung dieser Geier im östlichen Mittelmeerraum scheint derzeit insbesondere wegen der überwiegend vorherrschenden Windrichtungen eher unwahrscheinlich. Die noch vorhandenen Gänsegeierkolonien im Süden Bulgariens an der Grenze zu Griechenland scheinen andere Ausbreitungstendenzen zu haben. Die Auswilderungsorte im Balkangebirge haben ausreichend großen Abstand zur griechischen Grenze und unklaren ökologischen Verhältnissen dort, so dass die dort möglichen negativen Faktoren nicht auf die neuen Populationen durchschlagen können.

  Die Methodik zur Wiederansiedlung von adulten Gänsegeiern wurde mit sehr gutem Erfolg in Frankreich erprobt. Es werden Adaptionsgehege am Wiederansiedlungsort gebaut und Futterstellen in der Nähe des Wiederansiedlungsortes angelegt. Die Futterstellen werden in Betrieb genommen, kurz bevor die Käfige geöffnet werden. Aasfressende Rabenvögel zeigen denn dann ausfliegenden Geiern die Futterstelle. Diese ‚Kooperation' mit den Corviden ist durchaus erwünscht, da die Rabenvögel den Geiern oft den Weg zum Kadaver zeigen und so für das auffinden von natürlichem Fallwild für die Geier enorm wichtig sind. Der Zeitpunkt für diese Aktion bestimmt sich aus dem Alter der Geier und damit der Adaptionszeit auf das neue Gebiet. Bei der Erhebung des Bestandes an translozierbaren Gänsegeiern in Spanien und Frankreich stellte sich heraus, dass nur wenige adulte Tiere zur Verfügung stehen, aber überwiegend juvenile oder subadulte Geier. Dieser Umstand erschwerte die Projektdurchführung, da die Junggeier bis zur Geschlechtsreife (tritt etwa mit fünf Lebensjahren erst ein) in Volieren gehalten werden müssten, um ein Abwandern der Jungtiere aus dem vorgesehenen Wiederansiedlungsgebiet zu verhindern. Experimentelle Freilassungen jedoch zeigten, dass auch die juvenilen Tiere relativ gut ihr neues Habitat annehmen und nur geringe Vagranz zeigten.

  Die Futterstellen werden als Kadaverbeseitigungsstellen im Sinne der spanischen ‚muladares' veterinärbehördlich zugelassen, entsprechend der EU VO 1774/2002. Auch hier stellt das Wiederansiedlungsvorhaben in Frankreich die Präzedenz dar, wonach die Veterinärbehörden Ausnahmen vom allgemeinen Verbot der Belassung toter Haustiere im Feld erteilen können. In aufwändigen Machbarkeitsstudien wurden für die ausgewählten Wiederansiedlungsorte die Voraussetzungen für die aktive Wiederansiedlung der Geier untersucht und für machbar befunden. In allen untersuchten Bereichen sind die Faktoren, die zum Verlust der Gänsegeier geführt haben, insbesondere die großflächige Giftanwendung nicht mehr existent. Die Bewertung natürlicher Huftierpopulationen als potentielle Nahrungsquelle, wie auch der Bestand an Haustieren weisen auf ein üppiges Nahrungsangebot hin. Die historischen Brutstätten sind ebenfalls vorhanden und nicht beeinträchtigt und ihre Lage in einem bestehenden Schutzgebiet sollte auch die Weitgehende Störungsfreiheit und den Schutz vor Abschuss sicher stellen. Zielgruppe bei diesem Modul sind die Verbändevertreter, die sich mit dem Wiederansiedlungsvorhaben beschäftigen, aber ebenso die zuständigen Mitarbeiter der Schutzgebietsverwaltung. Dieses Module richtet sich bei erfolgreicher Ansiedlung der Geier natürlich auch an die potentiellen Besucher der Parks. Dieses Modul soll die Aufmerksamkeit eines breiten in- und ausländischen Publikums auf den Parklenken und somit auch eine wirtschaftliche Bedeutung der Parks für die Regionalentwicklung durch den gewünschten höheren Besucherzustrom unterstreichen. Letztlich soll die gesteigerte wirtschaftlich und regionalpolitische Bedeutung der Parks den Boden bereiten die nötige Ausweitung der Parks sowie die Anlage der wichtigen Migrationskorridore erleichtern. Die Geier am Himmel sollen den Bären, Wölfen und Luchsen am Boden sozusagen den Weg ebnen.

- **Kampagne zur zukünftigen Vermeidung von Vergiftungsfällen**

  Wichtig ist eine begleitende Kampagne zur zukünftigen Vermeidung von Vergiftungsfällen in enger Kooperation mit der verfassten Jägerschaft Bulgariens soll eine umfassende Aufklärungs- und Bewußtseinsbildungskampagne im Land durchgeführt werden. Zielgruppen sind neben der Allgemeinheit, die Naturschutzinteressierten, aber insbesondere die breite Jägerschaft, Viehhalter, Veterinärbehörden und Polizeikräfte. Für die verschiedenen Zielgruppen werden spezielle Informationsmaterialien erstellt. Ferner sollen speziell für die Veterinärbehörden und Polizeikräfte Schulungseinheiten durchgeführt, die bei

der Erkennung und fachgerechten Behandlung und Aufklärung von Vergiftungsfällen unabdingbar sind. Ein grünes Telefon nach spanischem Beispiel, wird bei einem der beteiligten Umweltverbände eingerichtet. Zielgruppe dieses Moduls ist die verfasste Jägerschaft in Bulgarien, aber auch die Haustierhalter, insbesondere Schaf- und Ziegenhalter.

- **Öffentlichkeitsarbeit zur Verbesserung der die Akzeptanz von großen Säugetieren**
  Neben der Öffentlichkeitsarbeit gegen Gifteinsatz muss auch die Akzeptanz von großen Säugetieren im Land geschaffen werden. Eine zentrale Rolle dabei stellt die noch vorhandene Wolfspopulation dar. Diese war in den achtziger Jahren Ziel einer flächendeckenden Vergiftungsaktion. Immer noch besteht in den Köpfen der Menschen die Meinung und Haltung, dass Wölfe getötet werden müssen. Inzwischen genießen auch die Wölfe in Bulgarien den gesetzlichen Schutz, jedoch hält dieser manche nicht davon ab, in die alten Verhaltensmuster zurück zu fallen. Eine besondere Zielgruppe daher, sind die Haustierhalter, insbesondere Schaf- und Ziegenhalter. Die Zusammenarbeit mit dieser Landnutzergruppe ist enorm wichtig, da ihre Tiere natürlich Zielobjekt für Wölfe, aber auch für mögliche zu wandernden Luchse zukünftig sein können. Zielgruppe bei diesem Modul ist die allgemeine Öffentlichkeit in Bulgarien, aber insbesondere die Anrainer der Schutzgebiete. Exemplarisch wird diese Kooperation mit der Gemeindeverwaltung Kotel, die zuständig ist für das gleichnamige strenge Reservat, entwickelt.

- **Vermeidungsmaßnahmen Kompensationsmöglichkeiten für Wildschäden**
  Vermeidungsmaßnahmen und Kompensationsmöglichkeiten für die Regulierung der Wildschäden bei Tierhaltern sind wichtige Akzeptanz schaffende Maßnahmen. Als sehr wirksam haben sich die Herdenschutzhunde der Karakachan-Rasse erwiesen. Diese sollen im Rahmen des Projektes den Schaf- und Ziegenhaltern zur Verfügung gestellt werden. Ferner soll im Rahmen des Projektes eine Kompensationsherde von Schafen und Zeigen aufgebaut werden und bei erwiesenem Wolfs- und später auch Luchsrissen, die toten Schafe oder Ziegen den Halter durch lebende Tiere ersetzt werden. Imker können vom Projekt Elektrozäune erhalten, um ihre Bienen-Stöcke vor Bärenübergriffen wirksam zu schützen, vorausgesetzt, sie haben alle in ihren Möglichkeiten stehenden Mittel und Maßnahmen ausgeschöpft. Zielgruppe dieses Moduls sind die Tierhalter in der Trägerzone der jeweiligen Schutzgebiete.

- **Erarbeitung und Umsetzung eines Tourismuskonzeptes auf der Basis der Wildtierbeobachtung in den Schutzgebieten.**
  Wildtiere, vor allem wenn sie der Beobachtung leicht zugänglich sind, können sehr attraktiv für ein Schutzgebiet sein. Erfahrungen mit den in den französischen Cevennen im Gorge de Jonte wieder angesiedelten Geierpopulationen zeigen, dass damit der Touristenzustrom in ein Gebiet erheblich erhöht werden kann. So werden dort gegenwärtig 32.000 Besucher pro Jahr gezählt, die exklusive zur Geierbeobachtung in die Cevennen kommen. Hierzu wurde speziell 1998 ein Geiermuseum erbaut, das ‚*Belvedere des Vautours'*. Dieses Museum erlaubt Touristen einen direkten Einblick in die Gänsegeierkolonie, ohne diese zu stören. Hierdurch alleine wurden 5 Arbeitsplätze geschaffen. Weitere Arbeitsplätze entstanden im Gastgewerbe in der näheren und weiteren Umgebung der Geierkolonien in Frankreich.

  Diese Wirkung lässt sich sicher auch für die bestehenden und im Projekt beteiligten Reservate generieren. Mit den jeweils für Öffentlichkeitsarbeit zuständigen Mitarbeitern der Reservatsverwaltungen sowie mit den beteiligten Verbänden wird ein entsprechendes und vor allem ansprechendes Tourismusprodukt in Form von Führungen und Wanderungen zu bestimmten Wildbeobachtungsplätzen etc. entwickelt werden. Kameras sollen die in den Auswilderungsgehegen gehaltenen Geier einem breiten Publikum, das die Infozentren der Schutzgebiete aufsucht präsentiert werden.

  Einige freizulassende Geier werden mit Satellitensendern ausgestattet, um deren aktuellen Aufenthaltsort jederzeit angeben zu können und gegebenenfalls raschen Eingreifen zu können, falls es zu Problemen kommt. Die Satellitensignale können ebenfalls im Internet dargestellt werden und analog zum International Bearded Vulture Monitoring (IBM), dem Interessierten Publikum weltweit, aber auch den Besuchern der Infozentren der Schutzgebiete vor Ort zugänglich gemacht werden. Hier bieten sich vielfältige Möglichkeiten der Öffentlichkeitsarbeit. Da ja im Braunbärenprojekt (AZ 24529-33/2) ebenfalls an eine Satelliten-gestützte Telemetrie von Braunbären gedacht ist, könnte man die Daten der mit Sendern ausgestatteten Bären ebenfalls im Internet abbilden (natürlich mit einer eingebauten Missweisung um der Wilderei keinen Vorschub zu leisten).

  Das gesamte touristische Produkt, mit seinen Facetten, wird dann in den herkömmlichen touristischen Destinationen Bulgariens beworben. Damit wird die Aufmerksamkeit auf die bestehenden Schutzgebiete gelenkt und diesen durch eine Tourismusentwicklung nicht nur eine positive Regionalentwicklung zu teil, sondern auch eine erhöhte politische Aufmerksamkeit bei den Entscheidungsträgern in Bulgarien. Dies ist eine notwendige Voraussetzung, um zu einer rechtlichen Ausweitung des bestehenden Schutzgebietssystems zu kommen.

  Ähnlich ausgerichtete Projekte in der Zielregion sind derzeit nicht bekannt. Als Problem könnte sich der Ausbau der Autobahn von Sofia über Gabrovo nach Varna erweisen, da hierdurch der Balkangebirgskamm durchschnitten wird und der westlich gelegen Naturpark Vratchanski Balkan vom Nationalpark Zentral Balkan abgetrennt wird.

  Ein Bärenmanagementplan für ganz Bulgarien ist inzwischen implementiert. Das von DBU und ZGF ge-

förderte Projekt für große Raubtiere in Bulgarien bildet eine wichtige Grundlage für die Identifikation der potentiellen Wanderkorridore, der Arrondierung der Trägerzonen und Festlegung potentieller Erweiterungsgebiete in den vorhandenen Schutzgebieten. Jedoch muss mit dem hier vorgeschlagenen Maßnahmenbündel eine positive Haltung bei der lokalen Bevölkerung und den politischen Entscheidungsträgern in Bulgarien herbeigeführt werden, diese naturschutzfachlich wünschwerten Ergänzungen des Schutzgebietssystems im Balkangebirge auch umzusetzen.

Ergebnisse

1. Zielartenkonzept
Ein zoologisches Zielartenkonzept legte zunächst fest, welche Arten im Verlauf des Projektes vorrangig gefördert werden sollten. Es wurden zahlreiche große Säugetiere wie Braunbär, Wolf, Gämsen und Rotwild, aber auch die vier europäischen Geierarten in das Zielartenspektrum aufgenommen. Die Geier wurden als übergreifende Flaggschiffarten für das Projekt festgelegt.

2. Habitatmodellierung für die ausgewählten Zielarten
Eine auf das Zielartenkonzept aufbauende Habitatmodellierung diente der Ermittlung der theoretischen Eignung des Balkangebirges als Habitat für die identifizierten Zielarten. Die Eignung des Gebietes wurde dadurch bestätigt. Des Weiteren konnten in diesem Zusammenhang die vier Wiederansiedlungsgebiete für die Geier ausgewählt werden.

3. Verbesserung der bestehenden Schutzgebiete
Der Einsatz für notwendige Erweiterungen oder Vernetzungen von Schutzgebieten, die sich aus der Habitatmodellierung ergeben könnten, sollte ebenfalls in das Projektprogramm aufgenommen werden. Solche Notwendigkeiten zeigten die Ergebnisse der Analyse jedoch nicht. Der Projektpartner Green Balkans wird zu einem späteren Zeitpunkt, wenn die Auswertung der Monitoringdaten vorliegt, auf die Erweiterung der Gebiete hinarbeiten.

4. Wiederansiedlung von Gänsegeiern
Die Wiederansiedlung des Gänsegeiers wurde bereits 2010 mit der Freilassung von 26 Tieren begonnen. Insgesamt wurden zwischen 2010 und 2013 172 Gänsegeier in den Schutzgebieten Vrachanski Balkan, Zentraler Balkan, Sinite kamani und Kotlenska planina in die Freiheit entlassen.

5. Monitoring
Zur regelmäßigen Überprüfung der Erfolge der Wiederansiedlungsversuche wurde ein Monitoringprogramm entwickelt. Dieses besteht aus häufigem visuellem Monitoring, Telemetrie, GPS-GSM-Tracking und Fotofallen. Als Monitoringmaßnahme für den Einfluss des Projektes auf die Öffentlichkeit wurde im ersten Projektjahr eine Befragung der Bevölkerung zu ihrer Einstellung gegenüber Geiern durchgeführt, die 2014 wiederholt wird.

6. Kampagne zur zukünftigen Vermeidung von Vergiftungsfällen / Kompensationsmöglichkeiten
Ein weiterer Schwerpunkt des Projektes lag darauf, die Gefährdung der Zielarten durch Jäger und Viehhalter zu verringern. Insbesondere stand hier die Vermeidung von Vergiftungsfällen im Fokus. Dazu wurde eine Aufklärungskampagne gestartet und es wurde damit begonnen, Hunde und Elektrozäune zum Schutz des Nutzviehs an Viehhalter abzugeben. Das Projektteam arbeitet außerdem gemeinsam mit lokalen Viehhaltern daran, eine Versicherung ihrer Tiere gegen Prädatorenangriffe zu ermöglichen.

7. Erarbeitung und Umsetzung eines Tourismuskonzeptes auf der Basis der Wildtierbeobachtung in den Schutzgebieten
Mit lokalen Stakeholdern wie bspw. Schutzgebietsverwaltungen, Politikern und Hotelbesitzern wurden die Chancen und Risiken des Tourismus diskutiert. Das Projektteam arbeitete Informationsmaterial aus, entwarf Wanderrouten durch die Schutzgebiete, errichtete Beobachtungsstationen in der Nähe von Plätzen, an denen sich die freigelassenen Geier durch anfängliche Zufütterung häufig aufhalten würden, und nahm an zahlreichen Veranstaltungen teil, um die Projektgebiete als Reiseziel zu bewerben.

8. Öffentlichkeitsarbeit
Eine umfangreiche Öffentlichkeitsarbeit diente dazu, die Akzeptanz der Zielarten sowie das Bewusstsein für ihre Schutzbedürftigkeit in der lokalen Bevölkerung zu steigern. Bei verschiedenen öffentlichen Events, unter anderem bei einem jährlich stattfindenden Geier-Festival, wurden die Besucher mithilfe von Informations- und Anschauungsmaterial über das Projekt informiert. Die Möglichkeiten, Bilder aus Fotofallen im Internet auszuwerten und Geier-Patenschaften zu übernehmen, erhöhen die Aufmerksamkeit für den Geier-Schutz und beziehen auch Menschen aus einem weiteren Umkreis bzw. der ganzen Welt mit ein. In hun-

derten Publikationen, verschiedenen Fernseh- und Radiosendern, einigen Zeitungen und auf zahlreichen Nachrichtenportalen wurde in den vergangenen Jahren über das Projekt berichtet.

Fazit und Diskussion

Die angestrebten Ergebnisse dieses DBU-Projektes konnten in großen Teilen umgesetzt werden. Bedingt durch die Co-Finanzierung durch ein EU LIFE-Projekt wurden große Erfolge bei der Wiederansiedlung der Gänsegeier in den Projektgebieten erzielt. Es ist zudem ein Verdienst des Projektes, sich trotz der hohen Förderung durch die EU nicht einzig auf die Wiederansiedlung einzelner Arten zu konzentrieren, sondern sich auch für die Verminderung von Gefährdungsfaktoren (Vergiftung, Nahrungsmangel, Windkraft etc.) sowie für die Stärkung der Schutzgebiete in der Projektregion durch Öffentlichkeitsarbeit und Tourismus einzusetzen.

Die geplante Erweiterung der Schutzgebiete konnte nicht erreicht werden, es wird aber erwartet, dass sich der Projektpartner Green Balkans weiter in diesem Bereich engagiert.

Abschließend ist festzustellen, dass die Voraussetzungen für eine erfolgreiche Wiederansiedlung des Gänsegeiers im Balkangebirge erfüllt worden sind. Die beteiligten Partnerorganisationen im Netzwerk des Balkan-Geier-Aktionsplanes arbeiten kontinuierlich, auch über die Dauer dieses DBU-Projektes hinaus, zusammen und können somit eigenständig die begonnen Aktivitäten zu einem dauerhaften Erfolg führen.

Recovery of the Populations of Large European Vultures in Bulgaria

Flagship species concept

Green Balkans Federation

Fund for Wild Flora and Fauna

Background

A flagship species concept for the Balkans will be developed. This concept is based on former projects on the reintroduction of the four European vulture species and on the identification of brown bear corridors. There already exists a management plan for brown bears, but it has to be considered if the activities of this plan will also benefit wolf and lynx. Activities for these two species have to be logically connected to the brown bear management."

Samways et al (1995) defined flagship species as 'known charismatic species that serve as a symbol or focus point to raise environmental consciousness'. The synonym often used is "umbrella species" as they an intrinsic part of ecosystem or dependent species of less appeal to the public, yet of often even greater conservation significance.

A study completed in Switzerland shows that both charismatic as well as uncharismatic species have the ability to positively influence public preferences for habitat variables that encourage biodiversity in urban landscapes (Caro et al. 2003). This is an important finding, considering the grim fame of vultures and the general public perception of the species.

Vultures as umbrella species

Vultures are large soaring birds, easily identifiable and observed from even large distance. They nest on rock niches and cliffs but depend on vast open areas for search of food. They feed on carrion, playing an important ecological role, preventing the spread of diseases among domestic and wild animals. In this sense, vultures are strongly dependent on preserved ecosystems with abundant flocks of wild or domestic herbivores and large predators, such as Wolf, Lynx and Brown Bear. This directly relates vulture conservation to sustainable extensive grazing and game management.

Large carnivores such as Wolf, Lynx and Brown Bear are indeed often used as flagship species, as they are indeed charismatic and can easily be turned into cuddly toys adored by children. In the current context however, these animals are perceived as enemy to farmers, cattle-breeders, hunters and tourists, as they can really incur significant damage. Changing this perception is an extremely difficult and long-term process, as this conflict has been building for years.

Vultures, on the other hand, are not direct competitors to man and could be recognized as a benign and even a beneficial species, considering the fact that they could save money for carcass disposal and attract birdwatchers and additional tourists. Despite the fact that they are most often perceived as dangerous, unpleasant birds, associated with death; the silhouette of the Bearded Vulture is familiar to everyone, being depicted on the logo, which indicates protected areas.

In addition to that, for years Bulgarian nature conservation NGOs have been working for improving the awareness and preparing the return of the vultures gone extinct.

The Vultures Return in Bulgaria project will therefore aim to adopt vultures as flagship species in order to not only protect additional species and habitats, but also attempt to improve the general awareness and perception on the role of vultures within ecosystems.

Transhumance as a management tool

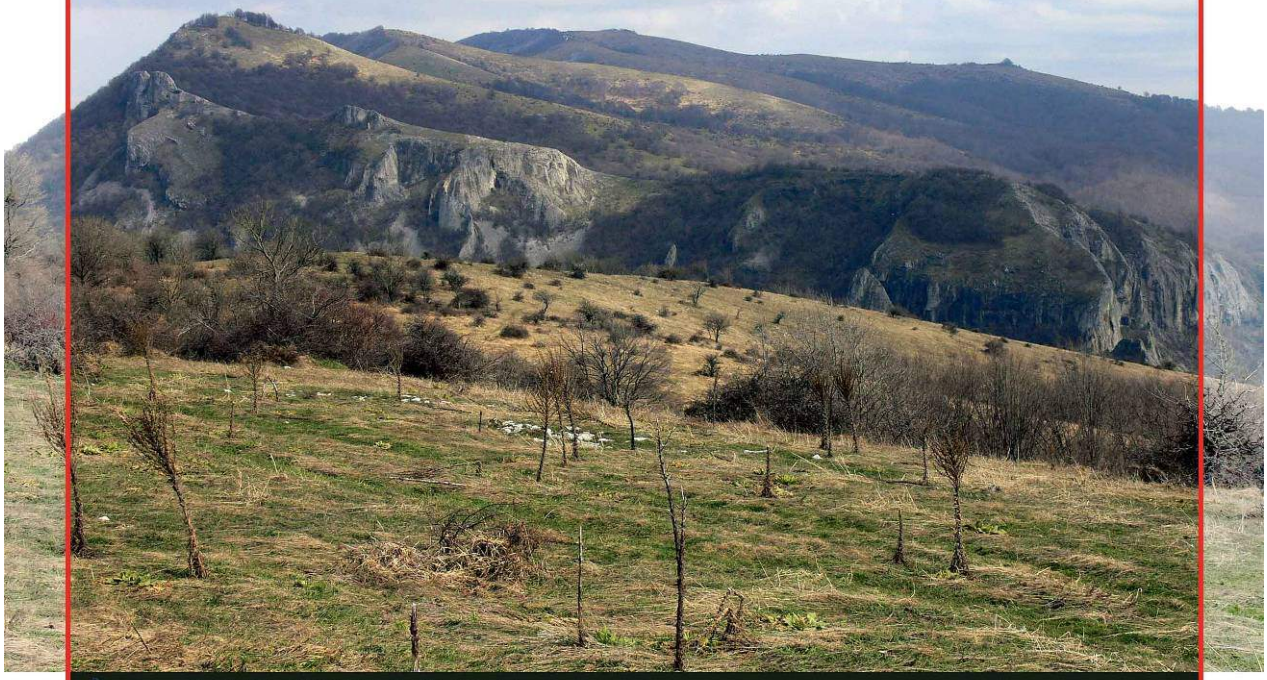
Transhumance practices were widespread and abundant in Bulgaria, as altering summer high mountain pastures with winter lowland grazing guaranteed the survival of numerous flocks of domestic animals of local autochthonous breeds, perfectly suited to survive the specific conditions and hard transfers. At the same time, periodic grazing maintained grass at low level and thus provided optimal conditions for species such as European Souslik (*Spermophilus citellus*) and Tortoises. These species are a significant part of the diet of species such as the Saker Falcon and the Imperial Eagle. At the same time, the movement of huge numbers of domestic animals was inevitably related to certain mortality on the way and thus provided additional food source for the large carnivores and also vultures. Currently, due to the change of local livelihoods, economic practices and agricultural uses, all these species have become rare and endangered.

The Project envisages to create a model pasture managed in sustainable way, using traditional pastoral techniques that have been in the basis of the favourable status of vultures as a flagship species and thus providing conservation for other threatened wildlife species like Imperial Eagle (*Aquila heliaca*), many species of butterflies, rodents as European Squirrel (*Spermophilus citellus*), predators like bear (*Ursus arctos*), wolf (*Canis lupus*) and others.

This mechanism will be a pilot scheme for promoting extensive sheep and cattle breeding in the region, which can be further applied, if successful in this demonstration project.

VIABILITY STUDY

on reintroduction of the Griffon Vulture (Gyps fulvus) in Stara Planina Mountain BULGARIA



KOTEL MOUNTAIN AREA

Stiftung bedrohte Tierwelt
Zoologische Gesellschaft
Frankfurt Zoological Society

BVCF

BVAP
Balkan Vulture Action Plan

DBU
Deutsche Bundesstiftung Umwelt

ФОНДАЦИЯ ЕКООБЩНОСТ

FWFF
Wild Flora & Fauna Fund

October 2006

Contents

Title:
Viability Study on Reintroduction of the Griffon Vulture (*Gyps fulvus*) in Stara Planina Mountain (Balkan Mountain), BULGARIA –
Kotel Mountain Area

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Griffon Vulture, reintroduction, Balkan Mountain in Bulgaria, Kotel Mountain

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Introduction

The Griffon Vulture (*Gyps fulvus*) one of the largest birds of prey species of our continent has become extinct in the most of its former breeding range in the Mediterranean area. Spain is the only country in Europe where a healthy and sizeable population has survived.

In the whole of the Balkans there are very few isolated small Griffon Vulture colonies left. In Bulgaria only one colony remained. It is located in Eastern Rodopi area. About 100 birds live there. Thanks to the conservation measures of BSPB this colony is now relatively safe and protected. Even second colony was formed in the last few years 20 km west of the first one. In total the number of the pairs in year 2006 was 34 pairs showing slight but stable increase.

In the Eastern Balkan Mountain the species became extinct in the end of the 60-ies years of XX century. This was mainly because of the mass strychnine use for predator control and direct persecution of the birds of prey. In the recent years the Law forbids the killing and capturing of birds of prey as well as the poison baits use.

The Action Plan for Conservation and Restoration of the Vultures on Balkan Peninsula and adjacent regions- an initiative started in the year of 2002, is combining the efforts of international and national experts, NGOs and local governmental organisations to restore the populations of the vultures in the region. The re-introduction of the Griffon Vulture in Kotel Mountain is considered an important part of the Balkan Vulture Action Plan and is approved by its Re-introduction committee in March, 2006.

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A. Presentation of the species

1. Taxonomy

Order: Falconiformes
Family: Accipitridae
Genus: *Gyps*
Species: *fulvus*

Polytypic. Nominate *fulvus* (Hablizl, 1783), North Africa, south and south –east Europe, south-west Asia south to Sinai, Arabia, and north-west Pakistan, and central Asia from Tadzhikistan to the Altai.

2. Morphology

Dimensions:

- long: 100-110 cm
- wing span: 260-270 cm
- weight: 7 500 – 11 000 g

The Griffon Vulture is one of the largest European birds of prey.

3. Reproduction

Courtship and breeding displays begin in December. Nesting on cliff ledge, or in shallow cave or crack, always protected by overhang. Colonial; 5-100 pairs, mostly 15-20. Rarely solitary. Nests reused in subsequent years. Lays one egg from the end of January to the beginning of March. Incubates 52 days (48-54). Age of first breeding is probably 4 or 5 years but success improves after the 7-th. Fledging period is 110-115 days. May leave nests and wander for short distances at 80-90 days.

4. Alimentation

Carrion feeder; mainly on soft tissues (muscle, viscera) of medium to large mammals. Probably uses larger area of search than other European vultures – Spain c.50-60 km radius from roosting or nesting area (Westernhagen 1962; Bernis 1966*b*). In morning, birds of colony fly off in one direction then, apparently, each individual systematically circles one area still within sight of neighbor (Glutz *at al*. 1971). Carcass taken fresh or putrid; usually mammals: domestic cow *Bos taurus*, horse *Equus caballus*, donkey *Equus asinus*, goat *Capra*, sheep *Ovis*, less often red deer *Cervus elaphus*, fallow deer *Dama dama*, fox *Vulpes vulpes*, dog *Canis* and others.

5. Situation in the World

The Eurasian Griffon Vulture is distributed as a breeding bird over the western Palaearctic from India, Pamir and Altai in the east, to Portugal and Spain in the west.

Areas in southern Europe surrounding the Mediterranean are the core – range with a strong focus on the Iberian Peninsula. The total population comprises around 20 000 breeding pairs and a total population (including the non-breeders) of unknown magnitude. Recently the number of the breeding pairs of the species increases in Spain, Bulgaria, Serbia and Israel. It is stable in Greece and Croatia and declining in Macedonia and the Asian countries. However the BirdLife International has listed the species as non SPEC species in 2004, which shows the general recovery of the population of the species, especially in Europe.

6. Situation in Europe

Once widespread across the continent, the species has undergone dramatic declines leading to extinction in the Alps and the Carpathians. These were mainly due to persecution by man and poisoning. The remnant populations are isolated and in urgent need of conservation action assisted by international cooperation and provision of expertise.

In 1986 the distribution of the Griffon Vulture was clearly distinct into two parts. In the western part of its range the species was found mainly on the Iberian Peninsula, northern Morocco, whereas in the east the Griffon Vulture occurred in Greece, Turkey, the Ural Mountains and certain regions of Israel and Jordan. In between, there are only a few small populations mainly on the Balkans.

In 2002 the distribution range is much more patchy but generally quite similar to the results from 1986. On the Iberian Peninsula the Griffon Vulture is established quite well and doubled its population size every 8 years. However, in many countries where the species occurred 16 years ago, the population decreased and the distribution has become very scattered. Especially in Greece and Turkey where the Griffon Vulture formerly showed a contiguous distribution, only few colonies in small patches can be found nowadays. This is also true for Croatia where the griffons remained only on some Adriatic islands. In contrast in between the eastern and western population colonies have been established in France and Italy as a consequence of reintroduction programmes since the 1980s. These new colonies are important as stepping-stones.

If we exclude the Iberian Peninsula, the populations seems stable in Europe during the last 16 years with about 2000 pairs. Including Spain the population equals about a magnitude of some 20 000 pairs. This means that only 10 % of the population exists on about 90 % of the species range (SLOTTA-BACHMAYR L., BOGEL R. & CAMINA CARDENAL, 2004).

7. Situation in Bulgaria

7.1. Historical situation

Data for the historical distribution of griffon vulture in Bulgaria appear for the last 150 years. *Finsch* (1859) presents the sightings as summer and winter, and pay attention of the hundreds of vultures gathering around a single carcass. *Farman* (1868) as well as *Elwes & Buckley* (1870) presents data for large colonies in Provadia River Valley. *Christovic* (1890) writes the species is common in Maritsa River valley as around Sofia is already rare. Four specimens were collected for the National Natural History Museum in Sofia between the years of 1900-1903. The most detailed description of the species distribution and status gives *Raiser* (1894)- griffon vultures could be seen in the different parts of the Balkan Mountain, Rodopi, Vitosha near Sofia, Samokov in Rila, Pazardzhik, Shumen, Provadia, the rocky cliffs around Danube near Nikopol, as well as a colony of 20-30 pairs in Yantra River valley. The species have been reported for Cherepish (Western Balkan Mts.) in a story published in 1907 by Ivan Vazov.

Bengler (1920) describes his observations of griffon vultures in Provadia River valley (around Kaspichan and Nevsha). Also *Muller* (1926) presents a colony of the Black Sea coast around Kavarna. After the 1925 *Won Boetticher* (1927) gives first signal for griffon vulture population decline in Bulgaria. Also *Harrison* (1933), *Patev* (1933), *Rensch* (1934) are providing data for decreasing of the large vultures number in Bulgaria. *Patev* (1950) says the large vultures populations are in continuing strong decline. *Nankinov* (1981) is evidencing presence of 20 griffon vultures on carcass around Burgas during the 20-ties years. *Von Jordan* (1940) and *Arabadjiev* (1962) have observed griffon vultures around Haskovo. *Niethammer* (1950) saw 40 griffon vultures on Vitosha. Boev (1965) has found griffon and black vultures around Slivnitsa in 1945-1946 years.

7.2. Recent situation

Single occasional observations of Griffon Vultures are reported from most of the former breeding areas. But until now only one area is hosting the entire Bulgarian Griffon Vulture breeding population – the Eastern Rodopi Mountain.

The colony in Eastern Rodopi is being monitored since 1978 and become managed after the BSPB project in 1994 when the Bulgarian –Swiss Biodiversity Conservation Program (BSBCP) has started. Following this project protected areas has been established. The protected areas include most of the known, past and present nest sites of the Griffon Vultures. Feeding of vultures, monitoring, public awareness and development of eco-tourism were the basic activities of the project.

Recently, efforts are undertaken to set up a Nature Park in the area to improve the functioning and to help government effort to protect the area. The conservation activities have been supported by BVCF/FZS since 2003 within the Action Plan for the Recovery and Conservation of the Vultures of the Balkan Peninsula.

7.3. Population dynamics

At present, regular reproduction only takes place in the Eastern Rodopi colonies with yearly, produce of about 20 offspring. The breeding habitat of the Griffon Vultures is low-altitude (230-800 m.a.s.l.), open rocky areas in the Arda River Valley. BSPB succeed to reduce almost all serious limiting factors of the species in the area. The population has gradually increased from about 16-20 birds in 1978 to more than 100 birds in 2000. Recently the population is increasing and seems to continue in future too. In 1998 new colony (close to village of Studen Kladenets) have been found in the same valley 20 km west of the first one (near the town of Madjarovo). It is formed mainly from young birds from the first colony.

In the year 2007 at the colony of Madjarovo there were 15 pairs while near Studen Kladenets were 21 pairs.

7.4. Food availability

The most important feeding area of Arda's Griffon Vultures was and still is a large grazing area on the slopes in both sides of the river and the central part of Eastern Rodopi Mountain. This is area inhabited by Turkish minority in Bulgaria, which are living primitively and still are breeding sheep and cattle in extensive grazing way.

Also here a feeding site has been established and is operating since 1986. The feeding-system was appeared to keep most of the birds-particularly in autumn and winter- within the protected zone and much reduces in this way the risks of shooting and poisoning.

Moreover, newly fledged birds that are most vulnerable to all kinds of threats tend much to stay together around the feeding site during their first winter. However they migrate to Africa in Sepetember- October and return to Rodopi in May. Some times occasional movements northwards are registered.

The core area of vulture presence in Eastern Rodopi hosts some 60 000 individuals of different kinds of domestic livestock. Also some 2000 fallow deer are living in Studen Kladenets Game Reserve. The wolves kill 2-3 animals every day. Out of this the BSPB team provides 18 000 kg annually additional food on three feeding sites in the area (Stoychev at all, 2004).

7.5. Threats

Apart from diminishing food-resources, a number of other problems threaten the griffon vultures of Eastern Rodopi:
- Mine operations such as the exploiting of rocky cliffs (which is prime breeding habitat of the Griffon Vultures) haven't been put under control yet, in spite of the protected status of the nesting area. The new roads invoke many heavy disturbances as they allow easy access to the natural area for hunters, egg collectors and the increasing number of tourists during the high season.
- Poisoning threats have been somewhat reduced after the official ban of use of poisoned baits and now only occasionally appears as illegal action.

8. Situation in Eastern Balkan Mountain

8.1. Historical situation

According to the reports of the Natural History Museum of Kotel the Griffon Vulture has been a breeding species until the end of the 1960s. A colony bred in the Zlosten area and some Griffons together with Black vultures roosted to the Yurushki Skali. In 1933 the local veterinarian set poison in a dead sheep killed by wolves. Three hours later a Bearded vulture, two Egyptian vultures and a Black vulture have been found dead around the carcass. In 1950 a Black Vulture has been poisoned next to the Yurushki Skali. Also two griffon vultures were found dead there. In 1971 one pair of Griffon Vultures still bred in Zlosten area near the town of Kotel (Donchev 1974). The same author in 1972 has found poisoned young Bearded Vulture near Sliven. Local people from the town of Sliven reported that the Griffon Vultures existed in the area until 1980s. They call the place where the Griffons were roosting "the French Café". This is because the sitting on the cliffs Griffons with their white collars seemed like French gentlemen. Near the village of Rish the local people reported presence of the Griffon Vultures until the end of 1970s.
The Egyptian vulture disappeared from the area of Kotel in 1993. Three pairs bred in the area of Sliven some five years ago. Probably one pair is still breeding in Sinite Kamani Nature Park. In the area of Rish 3 – 5 pairs of Egyptian vultures bred in 2004, but only 2 in 2007.

8.2. Recent situation

Since 1994 there are several observations mainly on single vagrant Griffon Vultures during the autumn and very few reports for summering birds.

N	Date	Area	Author	Notes
1	1994	Kotel	E. Stoynov	3 birds soaring > SE
2	1994	Sliven	G. Daskalova	1 bird around feeding site
3	1994	Burgas	E. Stoynov	2 birds migration > SE

4	1995	Kotel	E. Stoynov	1 bird
5	1995	Kipilovo	Snezhan Popov	1 bird
6	1995	Burgas	E. Stoynov	5 birds
7	1996	Burgas	E. Stoynov	3 birds
8	1998	Kotel	E. Stoynov	1 bird vagrant
9	25.09.2001	Sliven	Ivailo Angelov	1 ad. vagrant
10	23.09.2002	Sliven	Ivailo Angelov	1 subad. vagrant
11	09. 2002	Burgas	K. Nyagolov	2 birds migration > SE
12	05. 2003	Sliven	Stoycho Stoychev	1 bird
13	07. 2003	Kotel	Forestry Service	1 bird eating on red deer carcass > SW
14	09. 2003	Burgas	K. Nyagolov	3 birds Migration > SE
15	15.10.2003	Sliven	G. Daskalova	1 juv. Vagrant
16	06. 2004	Sliven	BSPB- Sliven	2 birds > S
17	21.09.2004	Burgas	BSPB	1 bird migration
18	25.09.2004	Burgas	BSPB	1 bird migration
19	12.10.2004	Kotel	G. Kochev	2 birds soaring > SE

9. Historical threats and limiting factors

In the beginning of the XX Century has begun the use of poisoned baits to kill predators. This practice became more and more common and reached it maximum in the 50-ies and 60-ies years. In that time the vultures' populations declined on the territory of the whole country. The use of poisoned baits was governmental initiative and all forestry services were obligated to set poison against predators and to kill as many as possible. In the same time the hunters were also obligated to kill as many as possible birds of prey. To provide numbers of legs of crows and birds of prey was a necessary condition in order to receive permission for hunting for the next year.

In that time also the veterinary control was increased and many equarisages were established. All the carcasses were collected as the livestock breeding was organized in large state cooperatives and almost no private livestock has remained. The system was very well organized and even the livestock was three times more than now the organization in the intensive manner and the collection of the carcasses led to the food scarcity the large vultures. In the same time the very few carcasses available in the nature were used as baits to set poison. The Egyptian vulture was the only species that still survived during this period. And this is mainly due to its migratory style of live. Probably during the winter mass poisoning of wolves and foxes took place also the hunting season is in the winter so the Egyptian vulture was not as much affected as the other species. Also more food for the Egyptian vulture was available around the villages and the rubbish dumps and near some slaughterhouses.

The Transhumance was forbidden and this caused decreasing of the number of the nomadic herds and the number of the livestock. Also this led to lack of grazing animals in the mountains.

The mine operations and the limestone quarries have destroyed some of the Griffon vulture cliffs. Also the forestry was very much market related and the forests were used extensively and many areas were afforested. This led to reduction of the quality of the forests and so lack of habitat for the Black Vulture. Also the pastures were reduced.

After the year 1989 with the end of the communistic period the numbers of the livestock decreased rapidly and in the year 2000 were almost 10 times reduced. In the same time the number of the wolves increased as well as the livestock breeding became extensive again. So even there is less animals at the recent times there is also too much carcasses available, due

to the extensive livestock breeding, good wolves population and the lack of equarisages. Also a lot of illegal slaughterhouses provide slaughter offal on rubbish dumps.
The threats in the past could be presented shortly as follows:

- Poisoning
- Shooting and direct persecution
- Decreasing of food resources
- Habitat loss

10. Recent threats and limiting factors

Recently out of the reduced food resources there is several new threats and limiting factors for the vultures in Bulgaria:

- Illegal poisoning – this is an action that even rare still exists in some areas of the country. Mainly where wolves are common. Also poisoning of feral dogs is common practice, but fortunately most of them are killed within the settlements and the carcasses are rarely exposed to vulture's eyes.
- Shooting – even rarely birds of prey are still targets of some poachers.
- Disturbance – in many former-breeding areas of the Griffon Vultures tourist parks are established, lifts, ski resorts. Many roads have been established by the forest service.
- Habitat alterations – mainly due to the change in the livestock breeding practices and the reduction of the livestock number the open pastoral areas were reduced and succession take place. Also due to the unsustainable forestry there is much more land covered by forests now, but the forest is weak and young.
- Reached critically low number of the population- the large vultures except the Griffon Vulture are unable to recover naturally their numbers recently. Even for the Griffon Vulture this would be very slow and difficult process.

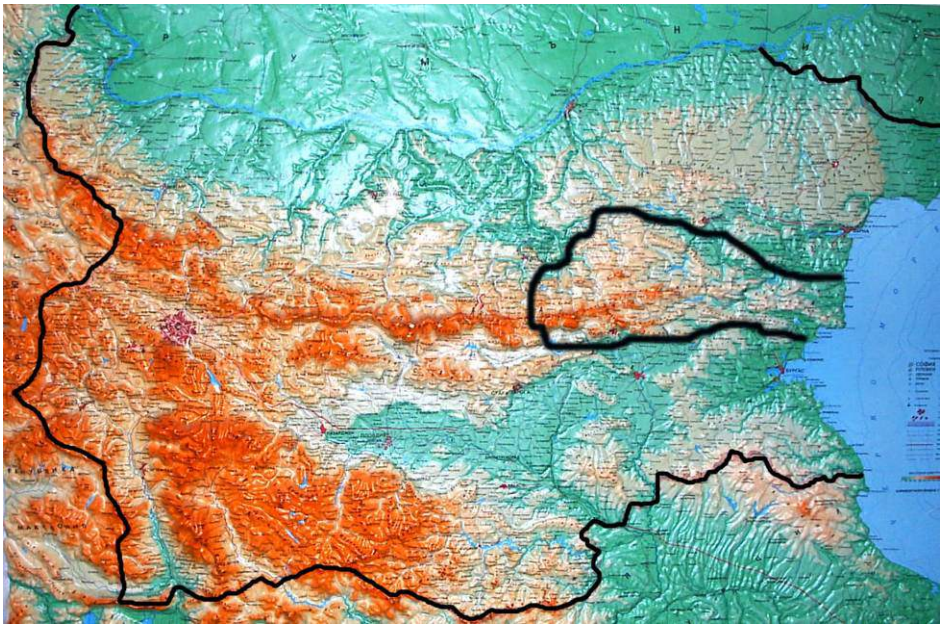
11. Legal protection

The Griffon Vulture is legally protected on the whole territory of Bulgaria (Biodiversity Conservation Act – article 37). It is included in the Bulgarian Red Data Book in the category "endangered". Many of the recent and former breeding areas are under protection by the law. The use of poisoned bits for predator control is forbidden in Bulgaria (Biodiversity Conservation Act, Hunting Act, and the Bern Convention).

B. Possibilities for reintroduction of the Griffon Vulture in Eastern Balkan Mountain

Figure 1. Existing Griffon Vulture colonies on the Balkans (blue spots) and planned re-introductions (red spots). The blue spots: 1. Croatia- Cres Island; 2. Serbia- Uvats Gorge; 3. Macedonia- Demir Kapia; 4. Macedonia- Tikvesh- Mariovo; 5. Greece- Tembi; 6. Greece- Nestos Gorge; 7. Greece- Dadia; 8. Bulgaria- Eastern Rodopi. The red spots: A. Bulgaria- Kotel Mountain; B. Bulgaria – Sinite Kamani Nature Park; C. Bulgaria- Central Balkan National Park; D. Bulgaria – Vrachanski Balkan Nature Park; E. Serbia- Stara Mountain Nature Park; F. Bulgaria – West Rodopi, G. Rila and Pirin National Parks

Eastern Balkan Mountain



The Eastern Balkan Mountain is a part of the Balkan (Stara) Mountain. The Balkan Mountain chain is situated in the middle of Bulgaria dividing the country of two parts- northern and southern. The highest part of Balkan Mountain is the Central Balkan Mountain, where the highest peak is Botev 2376 m.a.s.l.

Figure 2. Eastern Balkan and Eastern Fore Balkan Mountains in Bulgaria.

Eastern part of the Balkan Mountain is the lowest one and is finishing into the Black Sea to the east. The highest peak of it is Bulgarka 1181 m.a.s.l. The Eastern Balkan Mountain borders with the Central

Balkan Mountain to the west, with the Trakia Plain to the south, Black Sea to the east and with the Fore Balkan and Danube Plain to the north. The Mountain gets lower from west to the east. From the Vratnik Pass (the geographical border between Central and Eastern Balkan) to the Black Sea cost the Eastern Balkan is long about 160 km. It is wide about 70 km in its widest western part. The total area is about 11 000 square kilometers and the total number of livestock is as follows: Cattle- 56 000; Sheep and Goats- 306 000; Pigs- 42 200; Horses and Donkeys- 32 600. Although representing one larger area (Eastern Balkan Mountain), for the need of this study and the proper differentiation of the areas there were set three conditionally taken areas namely Sliven, Kotel and Rish. Each of them is of about 5000 to 6000 square kilometres – the average area of occupation of a single average colony of Griffin Vultures. The areas are overlapping each other as the potential breeding cliffs are set as a centre of the area and the polygon shows the potential foraging area for which the food sources, threatening factors etc are assessed.

Geographical Areas

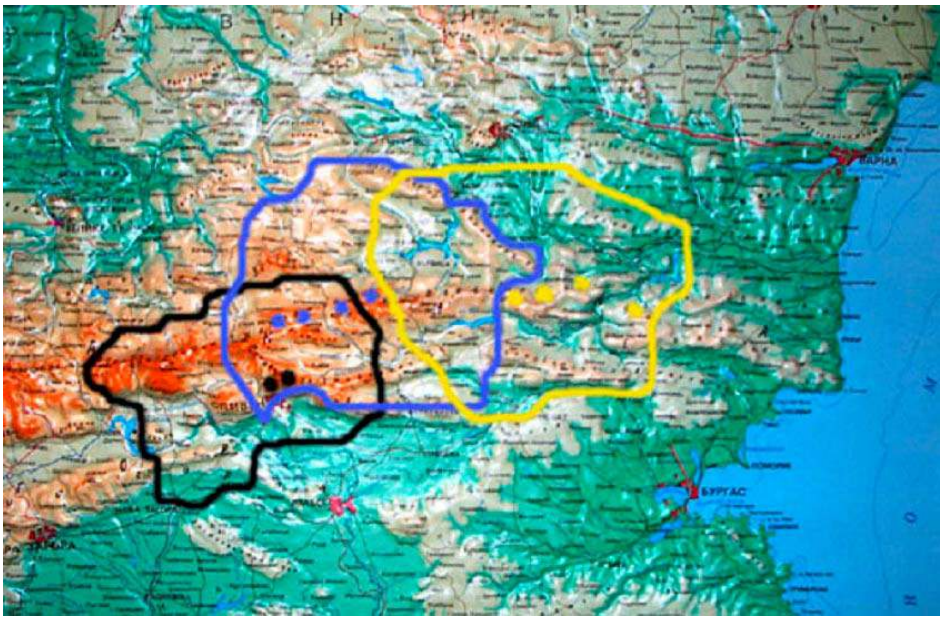


Figure 3. The three conditionally taken areas in Eastren Balkan Mountain with the main cliffs distribution. The black line is Sliven area, as the black spots show the main cliffs in the area. The blue line is Kotel area, as the blue spots are the main clifs in the area. The yellow line is Rish area, as the yellow spots are the main cliffs in the area.

<u>Sliven area</u>

This is conditionally taken territory with centre the town of Sliven and the near by situated "Sinite Kamani" cliffs considered suitable for breeding and roosting of Griffon Vultures. The whole area is about 5 485 square kilometres and covers the territories of 6 municipalities.

Figure 4. Sinite kamani near the town of Sliven

12. Geographical area

Sinite Kamani is the name of a rocky region, part of Sliven

Mountain, situated just northern of the town of Sliven. It looks like huge wall rises above the Sliven Valley of Tundja River. Sliven Mountain forms south branch of Eastern Balkan Mountain, which stretches parallel to Kotlenska Mountain. The highest peak of Sliven Mountain is Bulgarka (1181m). Average elevation of the region is approx. 700-800 m. and the altitude drops from west to east. Two main passes (Avramovski- 473m and Marashki- 255m) cut the mountain. The direct distance from "Sinite Kamani" to the cliffs around Kotel is some 18-28 km. To the Rish area it is about 54-65 km by air.
The vultures from "Sinite Kamani" are expected that will generally search for food in the Sliven Valley. They could go also to the north to Kotel area and Gerlovo if there are vultures in this area to attract Sliven's ones when carcasses exist.

13. Abiotic factors

13.1. Geomorphology and geology

The geological history of Eastern Balkan Mountain is closely connected to the formation of Balkan Mountain geosyncline during the Eocene Period. It is a part of Alps-Himalayas chain. A great folding movement caused forming of the diverse structure of Stara Mountain. The Kachulska Anticline forms the mountainous vision of Sliven Mountain. Very attractive rocky relief of the region is caused by the young Palaeozoic Perm quartz porfytes. Due to the big sustainability of the rocks there is steep deforested slope landscape and erected rocks on it. In addition, there are Mesozoic limestone rocks disclosed in the landscape. The region is poor of mineral and energy resources and there is only brawn coal source with national importance.

13.2. Climate

Territory of Bulgaria is characterized by temperate climatic type. Eastern Balkan Mountain occupies the trans continental zone with sufficient climatic impact coming of Black Sea and the Mediterranean. As south exposed slope of Sliven Mountain, the Sinite Kamani has conditions of higher temperatures in winter and the relief excludes the possibility for formation of temperature inversions. As a consequence, the spring rimes finish earlier and the autumn rimes come later. Summer temperatures are lower than those of Sliven valley and precipitation are heavier. The winter weather is soft.

Table of monthly, seasonal and annual average rates of precipitations for station of Sinite Kamani in mm

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Winter	Spring	Summer	Autumn	Annual
63	60	47	70	112	87	75	46	59	74	78	59	182	229	208	211	830

Table of monthly, seasonal and annual average rates of precipitations for station of Sliven in mm

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Winter	Spring	Summer	Autumn	Annual
46	41	31	50	67	66	54	37	32	43	61	59	145	148	157	136	587

Table of monthly average temperature distribution for the town of Sliven

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual	Temperature Amplitude
1.2	2.1	6	11	16	20	23	22	19	13	8	3	12	21.6

The local wind "Bora" appears in Sliven area. It is characterized by high velocity and is a result of movement of cold north air masses to south direction as the velocity rises in the region of narrow passes and blows into Sliven valley.

14. Biotic factors

14.1. Population and socio-economic factors

The town of Sliven is one of the biggest Bulgarian towns with population of 104 000 people. It is the municipal and a district centre. It is one of the main areas in Bulgaria for production of wool, meat and milk products. This is because of the very well developed livestock breeding in the area. In the town are living mainly Bulgarians, but also a lot of Romi (gypsies). The Karakachans (nomadic shepherds) are no longer raising livestock as it was forbidden during the Communistic period. They are now mainly going to work in Greece for seasonal employment. The Sinite Kamani is very much visited area especially during the weekends and the holidays. There is a lift line that transports the visitors from the town up to the mountain. This could raise some problems connected with disturbance of the large birds as the griffon vultures are. However there is a Nature Park and a Nature Reserve in the area so with proper management this could be avoided.

In the area are active three main NGOs working with conservation of the biodiversity and the vultures. These are the Bulgarian Society for the Protection of Birds – branch of Sliven (BSPB-Sliven), the Fund for the Wild Flora and Fauna – Kotel (FWFF- Kotel) and the Green Balkans-Stara Zagora. There are also a lot of societies of tourists, speleologists, alpinists, etc. They also could be involved in some conservation activities. The main state structures in the area are the "Sinite Kamani" Nature Park Directorate, the Forestry Service of Sliven, The State Game Station of Kotel and the Regional Environmental Inspectorates of Burgas and Stara Zagora. The Municipalities are also in charge with the nature conservation. The Natural History Museum of Kotel (NHM – Kotel) is working for conservation of the nature and is involved in activities for the reintroduction of the Griffon Vulture.

14.2. Agriculture, livestock breeding, game breeding and forestry

The area of Sliven is characterized with intensive agriculture. The flat areas of the Sliven Valley are covered with large fields of grain cultures, vineyards and fruit trees. Large areas with pastures in the lowlands also exist where the European Suslik (*Spermophilus cittelus*) forms remarkable colonies and a lot of Hares (*Lepus europaeus*) are present as well. These are the main areas where the birds of prey are searching for food.

The area could be dangerous for the birds of prey because of the use of pesticides that could cause a secondary poisoning in raptors. The problem is expected to grow in short time.

The main food sources for the vultures could also be expected in the lowlands. There are intensive pig farms, also many cattle and sheep are grazed in the flat areas. The main factor also will be the existence of several legal and many illegal slaughterhouses that provide slaughter offal to the rubbish dumps.

The livestock numbers:

N	Municipality	Area sq. km	Cattle	Pigs	Sheep/ Goats	Horses/ Donkeys
1	Sliven	1366	8 000	6 500	46 000	5 000
2	Kotel	858	2 500	2 000	12 500	1 700
3	Tvarditsa	443	1 800	1 700	9 000	900
4	Nova Zagora	877	5 400	6 900	26 000	2 000
5	Tundja	1218	6 200	7 000	43 000	6 000
6	Straldja	723	2 100	1 800	19 000	2 500
	TOTAL	5485	26 000	25 900	155 500	18 100

The density of all livestock species for the entire area is 41.11 animals per 1 sq.km. The large livestock (cattle, horses and donkeys) density is 8.04 per sq.km. The sheep and goats density is 28.35 animals per sq.km. The pigs are 4.72 per sq.km. It is obvious that the livestock is much more concentrated around the town of Sliven area, but no official data for that is available.

14.3. Wildlife species presence in the area

N	Species	Units	Number	Notes
1	Golden Eagle (*Aquila chrysaetos*)	pairs	7-11	
2	Imperial Eagle (*Aquila heliaca*)	pairs	2-3	
3	Egyptian Vulture (*Neophron percnopterus*)	pairs	1-3	
4	Griffon Vulture (*Gyps fulvus*)	individuals	2-3	Vagrants
5	Steppe Eagle (*Aquila nipalensis*)	individuals	2-3	Vagrants
6	Short Toed Eagle (*Circaetus gallicus*)	pairs	12	
7	Lesser Spotted Eagle (*Aquila pomarina*)	pairs	14	
8	Greater Spotted Eagle (*Aquila clanga*)	individuals	1-3	Vagrants
9	Black Kite (*Milvus migrans*)	pairs	4-5	
10	Long Legged Buzzard (*Buteo rufinus*)	pairs	5-7	
11	Buzzard (*Buteo buteo*)			Common
12	Honey Buzzard (*Pernis apivorus*)			Common
13	Montagu's Harrier (*Circus pygargus*)	pairs	8-15	
14	Booted Eagle (*Hieraaetus pennatus*)	pairs	6-8	
15	Black Stork (*Ciconia nigra*)	pairs	23	
16	White Stork (*Ciconia ciconia*)	pairs	79	
17	Wolf (*Canis lupus*)	individuals	69	
18	Golden Jackal (*Canis aureus*)			Common
19	Red Fox (*Vulpes vulpes*)			Common
20	Wild Boar (*Sus scrofa*)	individuals	870	
21	Roe Deer (*Capreolus capreolus*)	individuals	1220	
22	Red Deer (*Cervus elaphus*)	individuals	420	
23	Mouflon (*Ovis muflon*)	Individuals	30	

14.4. Tourism – traditional and alternative

The "Sinite Kamani" Nature Park provides good conditions for tourism. It is regional mountain resort as people from Sliven, Yambol and Burgas are going there during the hot summer.

It is related with the mountain villages of Zheravna, Medven and Kotel that are famous with the old houses with interesting architecture and a fresh air.

In Sliven there is a lot of history and ethnographic museums. Near Sliven is passing the main road from Sofia to Burgas as well as from Plovdiv to Burgas.

Even already some birdwatching touroperators are presenting the Sliven area to their clients the eco-tourism is still not developed. The Sliven area is very much suitable for that presenting a number of interesting species as: *Aquila heliaca, Oenanthe isabelina, Buteo rufinus, Hieraaetus pennatus, Aquila pomarina, Falco cherrug, Spermophilus cittelus, Vormela peregusna* and many others. The area is easy accessible by train, by bus or car, and is not far from the Burgas airport. Also it is very close (some 120 km) from some of the main Black Sea resorts.

The combination of the temperate climatic plain in the area of Sliven with the Eastern Balkan Mountain providing fresh air and old forests with cold streams is very much suitable for development of eco-tourism where the flying vultures could also be of tourist's interest.

15. Recent threats and limiting factors

The most common reason for death of birds of prey in the Sliven area is shooting. Although only Buzzards are shot illegally during the winter, special public awareness campaign should be provided.

In 2004 one young Imperial Eagle was caught near Sliven. The vets in the Rehabilitation Center in Stara Zagora said that the bird was electrocuted. So we should consider the electrocution as a threat for birds of prey in the lowlands.

Another threat for the birds of prey in the area is the use of pesticides in the agricultural lands. One raven has been found in the field near Sliven in 2002. Secondary pesticide poisoning targeting the voles (*Microtus spp*.) is suspected.

In the area there is small but increasing wolf population. This could potentially result to illegal use of poisoned baits. Shepherd dogs distribution among shepherds and public awareness campaign should be provided. In 2004 there was reported a case of suspected poisoning of wildlife near the Sliven rubbish dump as most probably the golden jackals (*Canis aureus*) were targeted. A badger (*Meles meles*) was sampled but no poison contamination has been detected. Also the two pairs of Egyptian vultures that have been breeding in the area until 2002 were observed regularly to feed on the dump. As these pairs are missing in the last two years a poisoning due to deratization is suspected.

Most of the livestock animals are bred intensively in the lowlands so the carcasses are less accessible for the vultures. The Transhumance should be promoted and the number of the livestock in mountains should be increased.

16. Protected Areas

In the area is situated the “Sinite Kamani” Nature Park – 7094,1 ha. It covers a wide rocky area with gorges and broad-leaved forests. In the frame of it the “Kutelka” Nature Reserve is declared for conservation of the birds of prey and especially the vultures.

On the territory of “Sinite Kamani” Nature Park are breeding three pairs of Golden Eagle (*Aquila chrysaetos*). Until 1999 there were two pairs Egyptian Vultures (*Neophron percnopterus*) but their recent status is unclear - probably extinct or not breeding. In the lower parts of the mountain are permanently observed gatherings of 6-8 young Imperial Eagles (*Aquila heliaca*). One or two pairs probably are breeding in the area irregularly. In the area the wolf and jackal are relatively common. The ravens form gatherings of up to 60 during the winter.

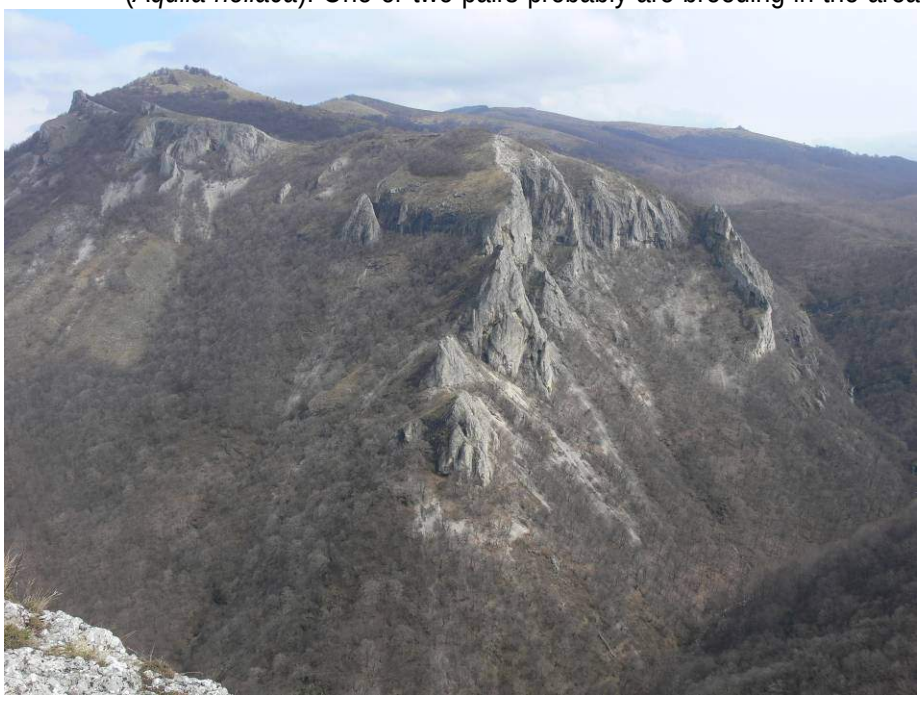


Figure 5. Zlosten Cliffs near the town of Kotel. Historical breeding place for Griffon and Bearded Vultures

<u>Kotel area</u>

This is conditionally taken territory with centre the town of Kotel and the near by situated cliffs considered suitable for breeding and roosting of Griffon Vultures.

The whole territory is about 5 792 square kilometres and covers the territories of 8 municipalities.

17. Geographical area

The northern branch of Eastern Balkan Mountain is occupied by Kotel Mountain with Kotel (695m) and Varbitsa (880m) passes. The highest point is the peak of Razboyna (1128m). To the north Kotel Mountain neighbours with Gerlovo Valley of Ticha River.
The direct distance between the rocky cliffs in Kotel area to Sinite Kamani near Sliven is 18-20 km. The distance to the Rish area's main cliff is 30 km. The Gerlovo Valley that is situated to the north of Kotel provides good opportunity for vultures to search for food. The other possibility is the Sliven area situated to the south.

18. Abiotic factors

18.1. Geomorphology and geology

Mainly Neozoic and Mesozoic sedimentary and metamorphic rocks including sandstones, conglomerates, limestone, marls, etc form Kotel Mountain.
The mentioned rocks have flush phase that leads to rounded landscape and lack of huge massive foundation. This is a reason for the existence of many river valleys and different geomorphologic forms. There are several limestone rocky cliffs in the region- Yurushki Skali, Orlovi Skali, Terzievi Porti, Orlitsa, and Zlosten. They are situated in the altitude between 600 and 800 m.a.s.l. There is a lot of small rivers with deep valleys. The main rivers are Ticha and Luda Kamchiya that are branches of the main river in the Eastern Balkan Mountain the Kamchiya River. The relief in the Kotel area is varying from steep and mountainous in the western part to relatively flat and hilly in the south-eastern and the north-eastern part.

To the north of Kotel Mountain is situated Gerlovo region, part of the Ticha River valley. It is characterized with flat relief forming a hilly area with open pastures and cultivated lands.

18.2. Climate

It varies from mountainous type to sub Mediterranean type of climate in a very small area. For the Kotel hollow, where the town of Kotel is located, there usually occur temperature inversions when the temperatures drop quickly and at very low rates to minus 20 C degree in winter period. This weather conditions could prolong few weeks. Also the snow layer could keep its big depth (30 cm) for a month in the frame of the hollow. Summer is cool. Through passes there blows in cold north wind.
At the same time, in the southern parts of the area the Mediterranean and Black Sea impact makes winter much milder, without prolonged and persistent snow layer and relatively high temperatures in comparison with Kotel hollow's ones.

Table of monthly, seasonal and annual average rates of precipitations for station of Ticha in mm

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Winter	Spring	Summer	Autumn	Annual
57	52	46	60	76	85	60	47	43	48	67	57	166	182	192	158	698

Table of monthly, seasonal and annual average rates of precipitations for station of Kotel in mm

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Winter	Spring	Summer	Autumn	Annual
70	63	51	73	86	84	66	48	48	58	81	82	216	210	198	187	811

19. Biotic factors

19.1. Population and socio-economic factors

Kotel is relatively small town with population of nearly 8000 inhabitants. In the northern part of the area are living Turkish people, while the southeast is populated mainly with Romi (gypsies). The Bulgarians are living in the big towns and in the part of the villages in the southern part of the area. The other circumstances are generally very much a like with the described for the Sliven area above. The main difference could be found in the very strong local FWFF- Kotel branch that is very much active

19.2. Agriculture, livestock breeding, game breeding and forestry

Almost 50 % of the area is covered by broad-leaved forests (oak and beech). The open areas are mainly used for intensive agriculture (Sliven, Straldja and Targovishte) and pastures in the mountainous and semi-mountainous areas.

Among the intensive agricultures the grain takes the most of the areas. Also tobacco is one of the main agricultures raised in the areas with Turkish minority (Kotel, Varbitsa, Omurtag, Targovishte). In the southern part of the region vineyards cover large areas.

The forestry is well developed in the mountainous areas. But the negative role of the forestry practice could be found in the keeping the forests young and in covering more areas with forests due to abandoned pastures. In the area of Kotel is situated the State Game Station – Kotel. They keep game species as red deer, wild boar and roe deer and are engaged in international hunting tourism.

N	Municipality	Area sq. km	Cattle	Pigs	Sheep/ Goats	Horses/ Donkeys
1	Sliven	1366	8 000	6 500	46 000	5 000
2	Kotel	858	2 500	2 000	12 500	1 700
3	Varbitsa	457	2 600	500	8 000	900
4	Omurtag	401	7 600	500	23 000	1 700
5	Targovishte	691	5 000	3 100	25 500	3 000
6	Straldja	723	2 100	1 800	19 000	2 500
7	Sungurlare	824	1 500	1 600	15 500	1 300
8	Antonovo	472	3 400	800	10 200	800
	TOTAL	5792	32 700	16 800	159 700	16 900

The total livestock density for the entire area is 39.04 per sq.km. The large livestock density is 8.56 individuals per square km. Also there is 27.57 sheep and goats per sq.km. The pigs are 2.90 per sq.km. But the highest density of 57.35 sheep and goats per sq.km is in Omurtag Municipality, where is also the highest density of the cattle 18.95 individuals per 1 sq.km. (See APPENDIX 1)

19.3. Wildlife species presence in the area

N	Species	Units	Number	Notes
1	Golden Eagle (*Aquila chrysaetos*)	pairs	7-11	
2	Imperial Eagle (*Aquila heliaca*)	pairs	2-3	
3	Egyptian Vulture (*Neophron percnopterus*)	pairs	1-3	
4	Griffon Vulture (*Gyps fulvus*)	individuals	2-3	vagrants
5	Steppe Eagle (*Aquila nipalensis*)	individuals	2-3	vagrants
6	Short Toed Eagle (*Circaetus gallicus*)	pairs	12	

7	Lesser Spotted Eagle (*Aquila pomarina*)	pairs	14	
8	Greater Spotted Eagle (*Aquila clanga*)	individuals	1-3	vagrants
9	Black Kite (*Milvus migrans*)	pairs	2-4	
10	Long Legged Buzzard (*Buteo rufinus*)	pairs	5-6	
11	Buzzard (*Buteo buteo*)			Common
12	Honey Buzzard (*Pernis apivorus*)			Common
13	Montagu's Harrier (*Circus pygargus*)	pairs	6-8	
14	Booted Eagle (*Hieraaetus pennatus*)	pairs	4-6	
15	Osprey (*Pandion haliaetus*)	pairs	1-2	
16	Dalmatian Pelican (*Pelecanus crispus*)	individuals	30	winter
17	Black Stork (*Ciconia nigra*)	pairs	19	
18	White Stork (*Ciconia ciconia*)	pairs	49	
20	Wolf (*Canis lupus*)	individuals	58	
21	Golden Jackal (*Canis aureus*)			Common
22	Red Fox (*Vulpes vulpes*)			Common
23	Wild Boar (*Sus scrofa*)	individuals	930	
24	Roe Deer (*Capreolus capreolus*)	individuals	1210	
25	Red Deer (*Cervus elaphus*)	individuals	520	
26	Mouflon (*Ovis muflon*)	individuals	30	

19.4. Tourism - traditional and alternative

The tourism in the area is developed in direction of cultural and common nature tourism. It is related with the mountain villages of Zheravna, Medven and Kotel that are famous with the old houses with interesting architecture and a fresh air.

In Kotel and the villages of Zheravna and Medven there are a lot of history and ethnographic museums. Kotel is situated of about 40 km in between the two main roads connecting Sofia with Varna and Sofia with Burgas. In Kotel is established one of the most interesting Natural History Museums in Bulgaria.

Even already some birdwatching touroperators are presenting the area to their clients the eco-tourism is still not developed. The area is very much suitable for that presenting a number of interesting species as: *Aquila heliaca, Aquila chrysaetos, Buteo rufinus, Hieraaetus pennatus, Aquila pomarina, Falco cherrug, Spermophilus cittelus* and many others. The area is easy accessible by bus or car, and is not far from the Burgas airport. Also it is very close (some 120 km) from some of the main Black Sea resorts.

The Kotel area is very much popular for speleo- tourism as a lot of caves exist there in the limestone fundament. Also the Game reserve of Kotel is providing conditions for hunting - tourism.

The combination of the temperate climatic plain in the area of Sliven with the Eastern Balkan Mountain providing fresh air and old forests with cold streams is very much suitable for development of eco-tourism where the flying vultures could also be of tourist's interest.

20. Recent threats and limiting factors

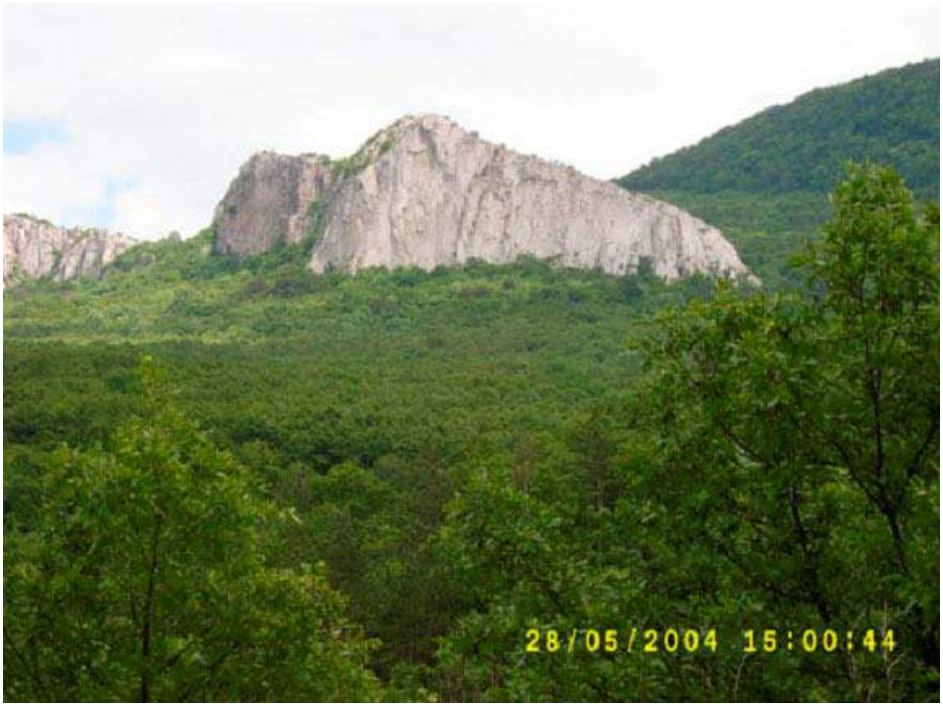
In the Kotel area the most recent threatening factor for the birds of prey is the nest robbery by local people. This is mainly a factor for the tree nesting species. There are several cases of taken from their nests young Golden Eagles, Buzzards, and Lesser Spotted eagles. However, as we consider that the nest robbery is due to lack of knowledge and low control this factor would be not difficult to reduce with some traditional conservation measures.

The cliff nesting birds are threatened mainly from the treasure hunters and cliff climbers. But this threat seems not difficult to control. Furthermore all cliffs in the area are declared as nature protected areas.
Shooting of birds of prey is only occasional. Mainly buzzards are some times shot during the winter due to lack of knowledge.
Poisoning seems that is not appearing as recent factor in the area. There are very few wolves and too much wild prey so very occasional attacks of livestock have been reported. In a case of deratization of the Kotel's rubbish dump in the winter of 1998 five crows (*Corvus corone*) have been found dead. But local firm took the dump on concession and permanent presence of people now does not allow the use of the dump by birds. Also restrictions for the deratization practice could be made for reducing the negative impact to the wildlife.
In the past Game reserve of Kotel was one of the most serious poison bits setting structure. But today as the Game reserve is State Game reserve it is believed that the Law is respected. Furthermore the State Game Reserve in Kotel is obliged to breed and restore the populations of the game species but the wildlife as well.

21. Protected areas

In the Kotel area there are several protected areas. Most of them include rocky formations suitable for breeding of Griffon Vultures. Protected are the limestone cliffs Orlovi Skali, Urushki Skali, and Zlosten, the last is connected with Orlitsa Nature Reserve – all in the vicinity of the town of Kotel. Improvement of the management in these areas should be considered as the process of succession is very much developed. However they provide suitable cliffs with many caves for breeding and roosting of Griffon Vultures. Kotel Mountain is declared Important Bird Area (IBA) and as such will be designated as SPA NATURA 2000 site.

<u>Rish area</u>



22. Geographical area

Rish area occupies the eastern lower level parts of Eastern Stara Mountain. It is too close to Black Sea coast. The average elevation is approx. 600 m and the Rish pass altitude is 416m.

Figure 6. The Orlitsa cliff, one of the main cliffs in Rish area, historical breeding place for Griffon Vulture and recent breeding place for Egyptian Vulture

23. Abiotic factors

23.1. Geomorphology and geology

Mainly Neozoic and Mesozoic sedimentary and metamorphic rocks including sandstones, conglomerates, limestone, marls, etc form the Kotel and Varbishka Mountain.
The mentioned rocks have flush phase that leads to rounded landscape and lack of huge massive foundation. This is a reason for the existence of many river valleys and different geomorphologic forms. There are several limestone rocky cliffs in the region - Kartal Kaya, Yuch Kaya, as well as several kilometers long gorges along the Kamchiya River next to the villages of Komunari and Partizani. They are situated in the altitude between 300 and 600 m.a.s.l. There are a lot of small rivers with deep valleys. The main rivers are Golyama and Luda Kamchiya that are branches of the main river in the Eastern Balkan Mountain the Kamchiya River. The relief in the area varies from steep and mountainous in the western part to relatively flat and hilly in the south-eastern and the north-eastern part.

To the north of the Varbitsa Mountain is situated Gerlovo region, part of the Ticha River valley. It is characterized with flat relief forming a hilly area with open pastures and cultivated lands. Similar is the area of Sungurlare plain, situated south from the main mountain ridge.
In the area are situated three large water dams - Ticha, Kamchya and Tsonevo. They provide circumstances for difference of daily ground heating and related thermals existence. The area is very much used from soaring birds (storks, eagles, buzzards, pelicans, etc.) during the migration periods.

23.2. Climate

The basic characteristic is the Black Sea climatic impact on the area. Including the low elevation of the region, it makes winter mild and summer hot.

Table of monthly, seasonal and annual average rates of precipitations for station of Rish in mm

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Winter	Spring	Summer	Autumn	Annual
62	67	55	65	83	74	56	48	46	48	80	66	195	203	178	174	750

The southern part of the area is with Mediterranean climatic impact and is traditional winter grazing area for sheep and other livestock.

24. Biotic factors

24.1. Population and socio- economic factors

The main towns of the area are Karnobat and Targovishte. The Turkish minority populates many villages in the area. Also many Romi are living in the area. The region is one of the very poorly developed in the country. Exceptions are the towns of Karnobat, Aytos and Targovishte that are situated along the main roads connecting Sofia with Burgas and Varna. The urbanization is very much actual in the area, as mostly the minorities are remaining in the remote areas. The Turkish minority is the main stock breeders in the area. While the Romi are mainly exploit the natural recourses as wood, herbs and mushrooms.
In the area there are not developed nature protection organizations. BSPB has a branch in the town of Karnobat. FWFF Kotel is active in the area, but mostly around the town of Kotel. Green Balkans are visiting the area occasionally. Except the Game reserves, no other protected areas' administrations exist in the area.

24.2. Agriculture, livestock breeding, game breeding and forestry

As said above the main stock breeders in the area are the Turkish people. They breed mainly sheep goats and cattle. Many pigs are bred by pastoral way. This is one of the regions in Bulgaria where traditionally pigs are bred on the pastures. This makes some conflicts between sheep breeders and the pig breeders, as the pigs dig the pastures and they are not in good

condition for the sheep. Also the region is one of the best wine producers in the country. In the northern and southern parts is developed grain production and the wine and fruit trees plantations. The forestry is well developed. Also several Game reserves are existing - Sherba and Veliki Preslav. The mountain is the main place for the pastoral livestock breeding. In the past the sheep herds have been moved from the mountain to the lowlands for the winter.

The number of livestock in the area:

N	Municipality	Area sq. km	Cattle	Pigs	Sheep/ Goats	Horses/ Donkeys
1	Smyadovo	354	600	2 600	7 000	1 100
2	Kotel	858	2 500	2 000	12 500	1 700
3	Varbitsa	457	2 600	500	8 000	900
4	Targovishte	691	5 000	3 100	25 500	3 000
5	Aytos	404	2 000	1 500	11 000	1 000
6	Sungurlare	824	1 500	1 600	15 500	1 300
7	Karnobat	806	1 800	2 300	25 300	1 600
8	Veliki Preslav	278	1 000	2 500	9 000	1 000
9	Ruen	690	4 600	900	16 000	2 100
	TOTAL	5362	21 600	17000	129 800	13 700

The livestock density for the entire area is 33.96 animals per 1 sq.km. The large livestock density is 6.96 individuals per 1 sq.km. The sheep and goats are 24.20 animals per 1 sq.km. The pigs are 3.17.

24.3. Wildlife species presence in the area

N	Species	Units	Number	Notes
1	Golden Eagle (*Aquila chrysaetos*)	pairs	9-12	
2	Imperial Eagle (*Aquila heliaca*)	pairs	0-2	
3	Egyptian Vulture (*Neophron percnopterus*)	pairs	4-6	
4	Griffon Vulture (*Gyps fulvus*)	individuals	4-6	vagrants
5	Short Toed Eagle (*Circaetus gallicus*)	pairs	10-12	
6	Lesser Spotted Eagle (*Aquila pomarina*)	pairs	10-14	
7	Osprey (*Pandion haliaetus*)	pairs	1-2	
8	Black Kite (*Milvus migrans*)	pairs	4-5	
9	Long Legged Buzzard (*Buteo rufinus*)	pairs	5-7	
10	Buzzard (*Buteo buteo*)			Common
11	Honey Buzzard (*Pernis apivorus*)			Common
12	Montagu's Harrier (*Circus pygargus*)	pairs	4-7	
13	Booted Eagle (*Hieraaetus pennatus*)	pairs	4-8	
14	Black Stork (*Ciconia nigra*)	pairs	15-23	
15	White Stork (*Ciconia ciconia*)	pairs	159	
16	Dalmatian Pelican (*Pelecanus crispus*)	individuals	30	winter
17	Wolf (*Canis lupus*)	individuals	10-14	
18	Golden Jackal (*Canis aureus*)			Common
19	Red Fox (*Vulpes vulpes*)			Common
20	Wild Boar (*Sus scrofa*)	individuals	850	
21	Roe Deer (*Capreolus capreolus*)	individuals	1100	
22	Red Deer (*Cervus elaphus*)	individuals	420	

24.4. Tourism – traditional and alternative

The tourism is poorly developed in the area mainly along the water dams, where many people spend their weekends. The main practice is fishing.

The remote areas of the region are very much suitable for visiting of birdwatchers and other nature lovers. In the area could be seen Egyptian Vultures, Black Storks, Saker Falcon, Long Legged Buzzard, Lesser Spotted Eagle, Golden Eagle, Booted Eagle, Imperial Eagle, Pelicans, Cranes etc.

The area is not far from the main resorts of the Black Sea.

25. Recent threats and limiting factors

The same as the area of Kotel – see point 20 above.

26. *Protected areas*

Except the protected areas around Kotel very few others exist. One nature reserve is declared near the town of Veliki Preslav called Patleyna. Two protected areas are preserving limestone rocky formations - Chudnite Skali and Svinska Glava. The main cliffs in the area Kartal Kaya and Yuch Kaya have been proposed for protection. Kamchiiska Mountain is proposed for SPA NATURA 2000 site.

C. Comparison of the region with other vulture areas

27. Eastern Rodopi

The Eastern Rodopi Mountain has low altitude hilly relief. Arda River divides it on two parts and

establishes several gorges with volcanic cliffs. The annual rainfall for Krumovgrad is 681 mm. The winter is the season with the basic rainfall of 32 %. During the spring are falling 24 % of the rains, during the summer only 17% and 27% during the autumn.

The warmest period is the summer (July and August) with average temperature of 22.1 C. The average annual temperature is 12.8 C, as the average temperature in January is of about 1.5-2 C.

The agriculture in the region is oriented to tobacco plantation as the livestock is bred in co-operations or is released to free pasturing.

The numbers of the livestock are:

N	Municipality	Area sq. km	Cattle	Pigs	Sheep/ Goats	Horses/ Donkeys
1	Krumovgrad	843	7 100	100	12 000	2 000
2	Kardjali	642	7 100	200	11 000	1 700
3	Momchilgrad	358	5 000	30	11 000	500
4	Chernoochene	339	3 500	-	5 000	1 300
5	Djebel	229	3 000	-	3 500	600
6	Harmanli	694	2 700	1 500	15 000	2 000
7	Haskovo	739	6 000	1 500	16 000	3 200
8	Madjarovo	247	1 200	100	4 000	400
9	Ivailovgrad	814	1 400	600	10 000	1 000
10	Stambolovo	276	2 500	500	5 500	1 000
11	Kirkovo	538	8 500	-	5 500	3 100
12	Lyubimets	344	900	1 000	6 500	1 400
	TOTAL	6 063	48 900	5 530	105 000	18 200

The total livestock density for the area is 29.29 animals per sq.km. The large livestock density is 11.06 animals per 1 sq.km. The sheep and goats are 17.31 per sq.km. The pigs are 0.91 per sq.km.

Comparing the number of the livestock with this in Eastern Balkan Mountain it could be seen that the cattle in Eastern Rodopi is two times bigger, but this could be compensated by the number of the sheep and the pigs that is respectively 50 % and 5 times more in Eastern Balkan. It should be considered the way of keeping of livestock in Eastern Rodopi, where it is mostly free ranging cattle, but in the same time the slaughterhouses in Sliven area are disposing sufficient quantities of slaughter offal- mainly illegally.

Wildlife species presented in the area of Eastern Rodopi are:

N	Species	Units	Number	Notes
1	Golden Eagle (*Aquila chrysaetos*)	pairs	7-11	
2	Imperial Eagle (*Aquila heliaca*)	pairs	1-2	
3	Egyptian Vulture (*Neophron percnopterus*)	pairs	22-25	
4	Griffon Vulture (*Gyps fulvus*)	pairs	30	
5	Black Vulture (*Aegypius monachus*)	pairs	1-2	
6	Steppe Eagle (*Aquila nipalensis*)	individuals	1	Vagrant
7	Short Toed Eagle (*Circaetus gallicus*)	pairs	12-20	
8	Lesser Spotted Eagle (*Aquila pomarina*)	pairs	7-11	
9	Greater Spotted Eagle (*Aquila clanga*)	individuals	1-3	Vagrants
10	Black Kite (*Milvus migrans*)	pairs	8-12	
11	Long Legged Buzzard (*Buteo rufinus*)	pairs	25-35	
12	Buzzard (*Buteo buteo*)			Common
13	Honey Buzzard (*Pernis apivorus*)			Common
14	Montagu's Harrier (*Circus pygargus*)	pairs	2-3	
15	Booted Eagle (*Hieraaetus pennatus*)	pairs	6-8	
16	Black Stork (*Ciconia nigra*)	pairs	42-48	
17	White Stork (*Ciconia ciconia*)	pairs	133	
18	Wolf (*Canis lupus*)	individuals	120-150	
19	Golden Jackal (*Canis aureus*)			Common

20	Red Fox (*Vulpes vulpes*)			Common
21	Wild Boar (*Sus scrofa*)	individuals	810	
22	Roe Deer (*Capreolus capreolus*)	individuals	600	
23	Red Deer (*Cervus elaphus*)	individuals	10	
24	Mouflon (*Ovis muflon*)	Individuals	50	
25	Fallow Deer (*Dama dama*)	individuals	2000	

The good point in Eastern Rodopi is that the vultures are distributed in the Greek part of the Rodopi as well. So they cover bigger territory and are able to search for food in wider region also exploring the Greek food sources for vultures. Also feeding of vultures on vulture restaurants in Bulgarian part as well as in the Greek part exist since the 1980s. For the year 2004 about 18 350 kilos of carcass have been provided on three feeding sites in the Bulgarian part of the Eastern Rodopi by BSPB team (Stoychev at all. 2004). Nearly that amount has been provided by WWF – Dadia project in the Greek side. The slaughterhouses around Krumovgrad, Momchilgrad and Kardjali are deposing slaughter offal at the rubbish dumps of these towns. Also in the Eastern Rodopi the Game Reserve of "Studen Kladenets" is playing important role in feeding of vultures. There are about 2000 fallow deers and 50 muflons in relatively small area of 200 sq.km. There at least a deer carcass of about 20 kilos is available every day. This amount of carrion in the Eastern Rodopi fulfils the need of food of about 300 large vultures and more than 100 Egyptian Vultures. But also of many foxes, wolves, wild boars, golden jackals and feral dogs etc.

The social status of the human population in the Bulgarian part of the Eastern Rodopi is very much important for the vultures. The Turkish minority is living in small villages and is breeding a lot of cattle and donkeys, most of which are free grazing and often become a victim of wolf attacks. So they are available for the vultures.

28. Demir Kapiya and Tikvesh in Macedonia

The areas of Demir Kapia and Tikvesh are very much similar to each other. There are a big gorge of river Cerna (Tikvesh) and one smaller one of river Vardar (Demir Kapia) with limestone cliffs forming the main rock faces used for breeding by the vultures. The two areas are situated on less than 20 kilometres of each other and the vultures nesting at the two places are visiting the both areas in searching of food. In Macedonia the vultures are feeding on the carcasses of a dead sheep and cattle, but

have also an easy access to several slaughterhouses dumps mainly near the towns of Shtip, Sveti Nikole, Veles and Negotino. The Griffon Vultures have survived in Macedonia without additional feeding until the year of 2000. After that time FWFF- Macedonia started a feeding program. Unfortunately despite of it and the common BVAP measures the population is suffering continuing poisoning and is in decline. It is not still clear which is the main reason for the use of poison baits in Macedonia. In Demir Kapia area it is known that foxes are permanently poisoned, while in other areas the wolf is an object of the illegal action. In a poisoning incident in 2003 more than 10 Griffons and at least two Imperial Eagles were poisoned in Ovche pole plain on a carcass of a poisoned domestic dog. Data for the number of the livestock is provided by Metodia Velevski from Macedonian Ecological Society (MES) in a specific study, but it is hardly comparable for certain vulture areas as no figures for the density are provided. However it is obvious that the number of the sheep of the nearly 4 times smaller Macedonia is the same as it is in Bulgaria ~ 1.2 million. The number of the cattle is only twice less than Bulgaria.

29. Nestos Gorge in Greece

The Nestos Gorge is situated in the Northern Greece not far from the Bulgarian border in a low altitude (150-400 m.a.s.l.) limestone gorge. There are huge cliffs, but the colony breeds on less significant one with south-western exposure and Mediterranean scrubland plants covering the most of the cliff faces. Extensive livestock breeding is well presented in the area. Here are the traditional wintering areas of the transhumant shepherds from the past. Now many sheep, goats and cattle are bred in the area as transhumance is no longer practiced due to economical and political reasons- the most suitable summer pastures in Rodopi area are behind the border in Bulgaria. However this colony of about 12 to 18 pairs in the past few years almost entirely have survived without additional feeding until recently when EPO is starting a feeding program. Although there is no data for the number of the livestock it is easy visible that there are a large number of large livestock holdings. Also the villages to the north are populated by pomaks that are still breeding large numbers of livestock. But the problem in the area seems to be the poisoning of foxes and may be wolves too. Data was obtained in personal communication with Hans Jerentrup. According to information from Teodora Skartsi – WWF- Dadia Project, there are about 9 million of sheep in Greece and about 5 million of goats, but no data for certain areas and densities in vulture areas is recently available. To compare – in Bulgaria on almost same territory there are 1.2 million of sheep and 0.6 million of goats. But the trend in Greece is decreasing, while the number in Bulgaria is increasing with the new circumstances with joining EU. So hopefully in a

short time it will be a sufficient number of livestock in Bulgaria to support new colonies of vultures.

30. Uvats Gorge in Serbia

Three breeding colonies exist in SW Serbia: Treshnjica gorge near Ljubovija, Uvats gorge near Nova Varos and Mileshevka gorge near Prijepolje. Generally, the breeding colonies are restricted to gorges of up to 1200 m a.s.l. and the foraging range extends over open and undeveloped areas (mainly pastures with livestock but also other open or semi-open habitats). In the years of 2001-2002 about 50-60 pairs of Griffon Vultures bred in these three colonies as the number have increased with about 80 % in the last decade and is continuing to increase. It seems that poison baits are not applied and thanks to the feeding program in Uvats Gorge the population is gradually increasing, as nowadays reaching more than 60 pairs. The Uvats Gorge is consisted of limestone cliffs in the continental climate range. The altitude is of about 300 to 800 m.a.s.l. No information is available for the livestock density and number. Seeing the map and looking at the pictures from Uvats Gorge it seems this area has the closest ecological and biogeographic characteristics to Eastern Balkan Mountain out of all compared Griffon Vulture areas on the Balkans. Thus more attention should be paid on this area development and information exchange should be initiated. The information is obtained by personal communication with Bratislav Grubac and Sasa Marinkovic.

31. Cres Island in Croatia

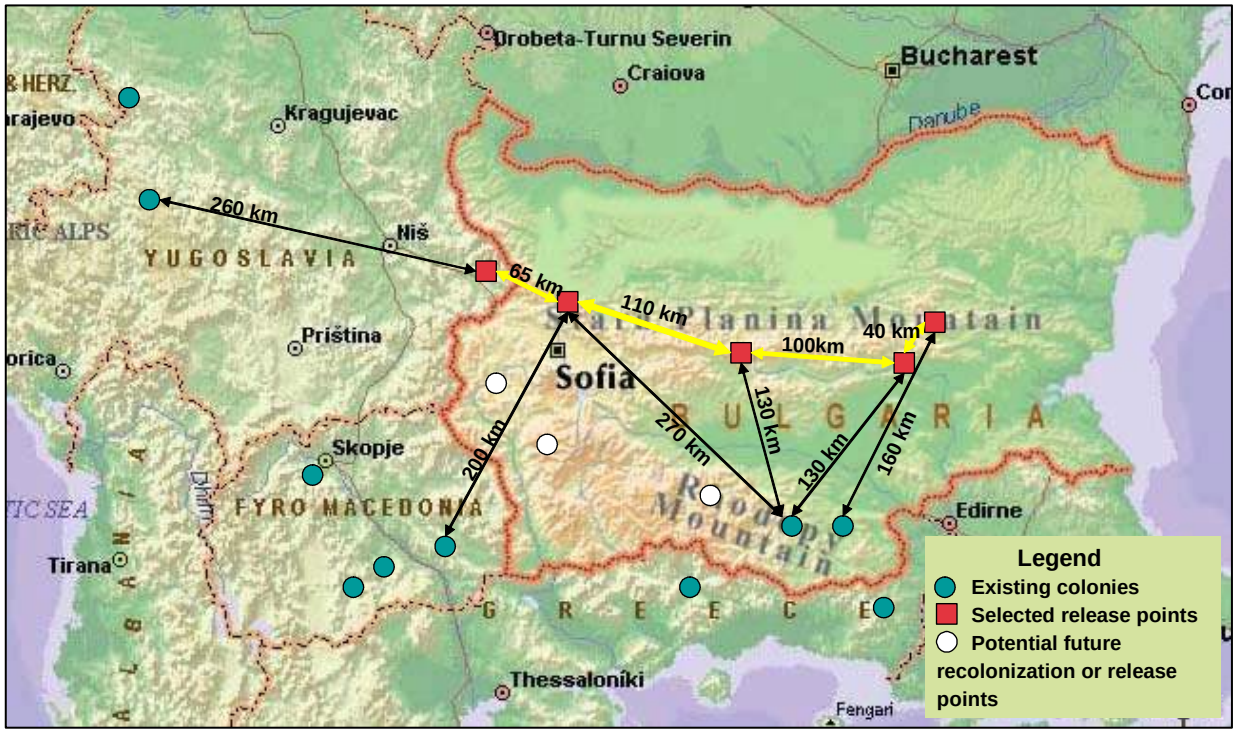
The Cres and Kirk Islands situation is hardly comparable with the inland areas of the Balkans. There the Griffons are nesting on cliffs just over the sea, using the winds of the sea for flying even before the sunrise and after the sunset. The islands are used for free ranging sheep breeding. There are no predators, and the all year round pasture of sheep is possible. The only problems for the vultures could be the limited food resources and the presence of a wild boar – introduced to some islands, that is persecuted by sheep owners even with poison baits as it often kills newborn lambs. The birds that are not breeding in certain year- immature or failed in incubating are summering in the Alps- a sign of a food shortage during the summer, but a good opportunity for using the wild ungulates carcasses in the Alps. The data was obtained in personal communication with Goran Susic and Gordana Povakovic.

D. Reintroduction of Griffon Vulture in Kotel Mountain

32. Strategy chosen

The reintroduction of vultures in regions of the Balkan Peninsula where they are extinct now is one of the tools for recovery of the Balkan Vulture Action Plan (BVAP). The strategy has been discussed within the BVAP and it was decided that it is possible and convenient to start at more than one place at the same time in order to give the maximum potential for the recovery of the Griffon Vulture on the Balkan Peninsula. Firstly the re-introductions of Griffon Vultures will take place in the entire Balkan (Stara) Mountain chain, where from the large vultures have been extirpated during the 70-ies of XX Century. The recovery of the Griffon Vulture in Balkan Mountain will help the entire Balkan Peninsula vulture population survival because of its central and important geographic situation. The establishment of Griffon Vulture population in Balkan Mountain will serve as a bridge among all more or less isolated colonies on the Balkans as well as will be a stepping stone between Balkan and Crimean vulture populations. The recovery of the vultures in Balkan Mountain will begin with the Griffon Vulture as a species for which a lot of experience for re-introduction exist and also a sufficient source of rehabilitated and captive bred individuals is on hand. If successful the re-introduction of the Griffon Vulture will be

followed by re-introductions of Black and Bearded Vultures in certain areas in the Balkan Mountain.



33. Methodology

The methodology chosen is in accordance with if not entirely repeating the well known and developed schemes for Griffon Vulture re-introductions in France. So according to the French practice will be established an acclimatization aviary of about 20 meters long and about 8 meters wide. It will be established in a wild area in the lower part of the slope with cliffs seen in front. Birds rehabilitated or captive bred will be transferred from Spain and France. They will spend as long as necessary time in the acclimatization aviary until reaching maturity and will be released in their 4-th year at the earliest. A group of minimum 12 birds will be released the first year and each following year will be released 12 more birds until reaching the number of 60 released and at least 40 birds in the wild. All details and instructions given by the French experts will be followed in detail (according to J.-P. Choisy)

34. Justification

There is no doubt the Griffon Vulture was breeding in the Eastern Balkan Mountain at least until the year of 1971. Obviously the reason for the extinction of this species from the area is the mass use of poisoned baits provided by the state authorities to control the wolf population in the past. As now this factor is eliminated and the others possible limiting factors are controlled it is up to us to help the returning of this species in the region. The breeding sites and the foraging areas are still well preserved.

The three main areas of Sliven, Kotel and Rish were occupied of colonies of Griffon Vultures that most probably covered the whole territory of the Eastern Balkan Mountain for foraging. This meta-population has served as a bridge between the Central Balkan Griffons and the ones in the Northeast edge of Bulgaria. They most probably were connected with the Rodopian Griffon Vulture colonies, as the distance is between 160 and 220 km. Recently Griffon and Black Vulture breeding colonies appear in Eastern Rodopi and on Crimean Peninsula.

Additional objectives will be achieved and more intensive conservation efforts locally will be gained (change of dangerous power-lines, recovery of livestock, effective foregoing against poison, etc.), which will benefit not only the recovery of the Griffon Vulture but also other endangered species and the whole ecosystem. In this sense, it is planned to undertake a Metareintroduction, the sites of which will be connected among them and cooperate for the common goal.

After 4 years of preparatory work within the BVAP and the compilation of a series of viability studies for the reintroduction of Griffon, Black or Bearded Vultures, the committee of the BVAP travelled to a part of the potential sites and evaluated the conditions of the reintroduction.

Within the BVAP the following reintroduction sites have been proposed so far by the participating NGOs and Governmental Institutions:

Bulgaria:

1) Vrachanska Planina (part of Balkan Mountain)(Griffon Vulture)- approved by the Re-introduction Commission of BVAP to start the reintroduction as soon as possible.
2) Central Balkan National Park (part of Balkan Mountain) (Griffon Vulture)- approved by the Re-introduction Commission of BVAP to start the re-introduction under condition if no cases of illegal poisoning are reported in next few years.
3) Eastern Balkan Mountain– Kotel area (part of Balkan Mountain)(Griffon Vulture)- approved by the Re-introduction Commission of BVAP to start the re-introduction as soon as possible
4) Sinite Kamani Nature Park (part of Balkan Mountain) (Griffon Vulture, Bearded Vulture)- approved by the Re-introduction Commission of BVAP to start the re-introduction as soon as possible
5) Western Rhodopes (Bearded Vulture)- postponed. Continuing data collection and preparation.
6) Rila Mountain (Bearded Vulture)- postponed. Continuing data collection and preparation.
7) Zamen Gorge, South-West Bulgaria (Griffon Vulture)- postponed. Continuing data collection and preparation.
8) Eastern Rhodopes (Bearded Vulture, Restocking of Black Vulture)- postponed. Continuing monitoring of the existing Griffon Vulture colonies and the Black Vulture non breeding groups.

FYR of Macedonia

9) South Macedonia (Black Vulture)- viability study in preparation.
10) Matka Gorge (Griffon Vulture)- viability study in preparation.

Romania

11) Carpathian Mountains, Retezat National Park (Griffon Vulture)- Decision not yet taken.

Serbia

12) Stara Planina Nature Park (part of Balkan Mountain) (Griffon Vulture, Black Vulture)- approved by the Re-introduction Commission of BVAP to start the re-introduction as soon as possible

Croatia

13) Velebit Mountain National Park- Viability study in preparation.

Establishing new Griffon Vulture colony particularly in Eastern Balkan Mountain will serve as a stepping stone for Crimean, the Rodopian and the Serbian meta-populations during their

medium distance movements. The young birds from these areas will be able to find vulture groups in another safe area and would feed and stay with them for a while. The re-introduction of the Griffon Vulture in Eastern Balkan Mountain will benefit the conservation of the whole ecosystem and other species of birds of prey as the Imperial Eagle, Egyptian Vulture, White – tailed eagle etc. Also this would be a base for future re-introduction of the Black and Breaded Vulture too. The area is situated not far from the Black Sea coast's resorts and so tourists could be attracted in the area to watch the vultures. This will stimulate the local people to preserve the nature and the vultures.

35. Action Plan for Griffon Vulture reintroduction in Kotel Mountain

Education campaign

It is directed to the poor awareness the Bulgarian people have about general ecology of raptors and the significance of their conservation, to educate against poisoning and illegal hunting.

- *Visits to schools in the towns and villages in Kotel Municipality.*

Schools of respective villages of the Municipality of Kotel will be visited and will be explained basic biology, threats, and the conservation of the vultures, using multimedia projections, drawings, colour-slides, demonstration materials like skulls of different raptor species, feathers etc.

- *Visits to cafes in the towns and villages in Kotel Municipalities*.

In coordination with the schools visits also talks with community officers and locals will present. Information about livestock, hunting, and presence of vultures and about wolf-problems will be discussed. The importance of the Griffon Vulture reintroduction will be promoted.

- *Visits of foresters in the future Griffon Vulture area*.

Apart from regular contacts with the Forestry Services in the all towns of the Municipality of Kotel and Omurtag the project will initially be presented in more detail and in presence of all relevant personal and field-guards. Lectures with multimedia projection will be shown and education materials distributed.

- *Visits to hunter clubs and federations*.

In the future Griffon Vulture area in Municipalities of Kotel and Omurtag cooperation is sought with hunters' representatives to inform them about the plight of the last vultures in Bulgaria and for the soon coming re-introduction of the Griffon Vulture in the region.

- *Visits to herdsmen in the field*.

Shepherds are difficult to reach by the mass media. They have the most direct relation to the vultures and often know them very well. Generally, their attitude towards the vultures is positive. To prevent any potential attempt of poison use, directed to the wolves a special approach to shepherds in the field would be undertaken.

- *Education materials.*

Multimedia presentation for schools-talks.
Multimedia presentation for adults: in small variations for the three main target groups: foresters, hunters, villagers.

Announcement poster for distribution in villages, in four colours, A2 (flying Griffon Vulture) for educational talks 2000 prints.
Poster against poisoning A1, four colours - already printed in 1000 copies by FWFF- Sofia will be distributed among the veterinarians and the forest guards.
Leaflet comic about the biology, dangers and protection of the Griffon Vulture. Translated from the French original into Bulgarian. Distribution in schools and for interested persons in the Griffon Vulture regions. Black and white, 2000 prints for southwest of Bulgaria.
Leaflet about the biology, dangers and protection of raptors.
Distribution in schools, forestry –services, hunting clubs, education centres of nature –reserves, 32 pages with colour photos and drawings, 5000 prints.
Sticker of the program. Distribution in schools and for interested persons, two colours, 5000 prints.

- *Television: all on national level*
Video-clips with propaganda against hunting of protected species.
Video about the French project (in the Cevenes National Park with an introduction to the Kotel project).
Reportage about the release of first Griffon Vultures in Kotel area.

- Radio programs of local stations directed to shepherds, hunters, foresters and villagers of Municipalities of Kotel and Omurtag. Vulture biology, their link to livestock and wolves, the poisoning problem will be discussed. Shepherd can be invited.

- *Press articles and –conferences*
One conference is planned in the beginning of hunting season. Other press-meetings will be held on arrival of the birds at the airport in Sofia, as well as after the release. Photo articles will be provided to popular periodicals.

Release

Griffon Vultures from Spain and France obtained through the BVCF are to be sent by airplane to Sofia Bulgaria. They will be picked up by the project leader and transported to Sofia Zoo or the Green Balkans Rehabilitation Center in Stara Zagora, where their health -conditions will be checked and after 30 days of quarantine they will be transported to the acclimatization aviary in Kotel. The animals will stay in the cage as much as it is necessary until reaching age of 4 years and more (according to J.-P. Choisy). During that time they will make first contacts with the other vultures in the cage as well as with the wild ravens and Golden eagles in the area.
The date of arrival of the vultures in Bulgaria depends on availability of recovered Griffon Vultures in the different Raptor recuperation centres. The experience of Spanish biologists says that mostly young birds are got in the autumn after the fledging period.

- *Selection of the release place*

To allow the birds to adapt optimal to their new environment, the release place and its conditions has to be chosen carefully. The following criteria have been important for the selection of release place (in accordance with J._P.Choisy notes):
It is situated in the historical place, where Griffon Vultures have been most frequently observed to roost and breed in the past – namely the Yurushki Skali Protected area.
The zone is protected and law forbids hunting.

It is situated near the existing feeding –site to facilitate intensive visual contacts of the immigrants with the wild Vultures, Ravens and Eagles.
A field – road gives access to the feeding site and release place.
The area is nearly free from human disturbances.
Only shepherds pass occasionally with their flocks.
The access road can be closed and guarded by forest guard during the release period.
The cage has been established on a south slope, where it is protected against the north wind and wide view is possible.

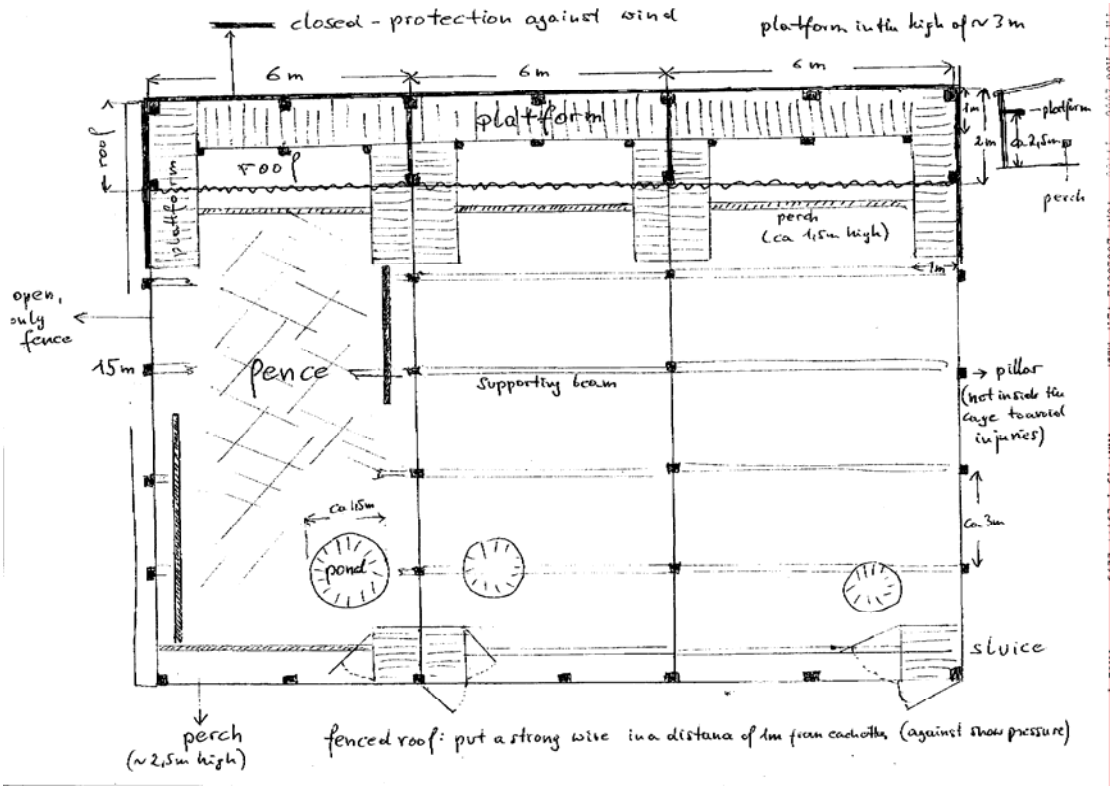
- Cage

The cage has been built on a south-eastern slope at 600 m a.s.l. A small pathway allows easy and quite hidden access for the feeding.

The release door leads in direction to the rocky cliff (former roosting and breeding place).
The cage size is a compromise between the need of large room to allow movements of the birds and the danger of detection by accidentally passing or curious persons, which could cause disturbance.

Figure 7. FWFF's Griffon Vulture acclimatization aviary in Kotel

The dimensions are 6 x 12 x 3 meters.
Inside, several perches are built in the edges of the cage in different highs in a way that the birds are not hampered, but rather invited when moving around. The fence is fixed on metal pipes and with them in a beton basement. The floor of the cage is cleaned from shrub but some rocks are available inside.
A water pond of about 1 m x 1,5 m is in the middle of the cage. A hidden plastic tube connects it with the outside. Since the acclimatization aviary of FWFF built in 2003 is found small and insufficient by the BVAP Re-introduction committee, another one will be established with the plan by Hans Frey presented bellow.



- Marking

The Vultures will be ringed each with an official metal ring and a green-coloured plastic bands with big white letters (provided by EGVWG). For the individual identification of the flying birds they will be marked by decolouration of primary or secondary feathers.

Figure 8. Plastic banded Griffon Vulture before its transfer to FWFF's acclimatization aviary in Kotel

The decolouration means is based on H202 used in hairdressers business. Also wing-tags could be used if necessary. Radio tags will be used for following the birds in the first months of their liberation. All marking and taking of measurements will be carried out before the birds enter the release cage.

- Release

The vultures will be released in the end of October when their migration period has been passed (according to J.-P. Choisy). A suitable wind conditions will be expected. The birds in the cage will not be fed for a three days before the releasing day. The door will be opened and food will be set outside the cage.
The releasing places in Kotel and Sinite Kamani Nature Park are on a distance of about 30 km from each other. So according to J.-P. Choisy the first fixed group will attract the other and may be will reoccupy its area of origin few years latter. It is not known what will happen if the release take place on the both places in the same time. Probably the birds will chose the most suitable one. In any case it is not a problem as we consider the Eastern Balkan Mountain as one area and the success of the re-introduction on even one of these places would be a success. So the details on this matter will be discussed and the best decision for the success of the project and the birds' welfare will be taken.

- Guarding

During the whole release period the access road is closed and guarded by the forest guards and FWFF volunteers. One person from a hide daily observes the vultures in the cage. The observer can enter and leave the hide without being seen by the vultures.
After the opening of the vulture door for their release, two observation points are used: From one point the entire cage –slope, feeding place and the entire gorge will be controlled. The second one will be in the hide close to the cage, to observe the behaviour of the vultures and the releasing process. The project team and volunteer helpers will carry out the observation.

- Feeding

The birds in the cage will be fed during the day as discreet as possible through the door. Frequency will be one or two times a week (depends from the whether and the number of the vultures in the cage). At the same occasion the pond is always filled up again with water by the plastic tube from the outside. It is not necessary to enter the cage for any feeding or cleaning works. The food will be butcher's offal or meet taken from the animals brought to the feeding-place, which are obtained from the local farmers. It is normally donkey and sheep, occasionally calves and cows.

- Feeding sites

The recent feeding place should be re-established close to the cage. The feeding frequency should be every week, or even less in the first several months - depends on the availability of food- animal. The feeding place will be fenced with electric fence.

- Studying the movements and behaviour of the Griffon Vultures in the region roosting places, feeding site etc. The nest -sites will be controlled monthly during the breeding season especially to assess whether the Griffon Vulture do visit or roost on their aviary. Breeding is not expected in the first year of releasing but it will be controlled too.
- Studying the wolf predation problem. The wolf-activity and the possible solution of the problem with returning (breeding and dispersing through the shepherds) of Karakachan shepherd dog (traditionally used, but already lost) have to continue. The application of livestock compensation program would be possible.

- The natural food supply in the Municipalities of Kotel, Sliven and Omurtag should be assessed and controlled. The dead animal disposal of local vulture restaurants should be promoted and managed.

36. Involved actors and on-going activities

Involved organisations within the BVAP:

Fund for the Wild Flora and Fauna (FWFF) – a local NGO that is responsible for the implementation of the project activities in Kotel Mountain. The FWFF is an initiator of the re-introduction of the Griffon Vultures in Kotel Mountain. Most of the actions on the field will be implemented from FWFF team members. Any logistics, contacts with local authorities and local administration will be responsibility of FWFF. www.fwff.org

Green Balkans – a local NGO that is responsible for the implementation of the activities in Sliven area. The Green Balkans is an initiator of the re-introduction of the Griffon Vultures in Sliven Mountain and particularly in Sinite Kamani Nature Park. Most of the actions on the field will be implemented from Green Balkans team members. Any logistics contacts with local authorities and local administration will be responsibility of Green Balkans. www.greenbalkans.org

Black Vulture Conservation Foundation (BVCF) – an International NGO that is responsible for the expertise, international communication and support of the project. The BVCF is responsible for finding and transferring the necessary birds for release. www.balkanvultures.net

Frankfurt Zoological Society (FZS) – an International NGO, main donor of the BVAP that is helping the project through financial contribution and expertise. www.zgf.de

Bulgarian Environmental Partnership Foundation (BEPF) – International NGO that is responsible for the administration of the projects of BVAP for Bulgaria. BEPF is responsible for the PR and communication with the state authorities on national level. www.bepf-bg.org

LPO Mission Rapaces – an International NGO, helping with expertise on vulture conservation and re-introduction. The organisation has implemented several successful re-introduction projects of Griffon and Black Vultures in France. And it is the main know-how provider for the vulture re-introduction projects on the Balkans.

Bulgarian Society for the Protection of Birds (BSPB), the Sliven Branch – a local NGO that will be involved in the monitoring activities. Some volunteers could be involved in any kind of action in the areas of Kotel and Sliven. The most experienced BSPB members would help with the monitoring of the vulture in the area of Eastern Balkan Mountain. www.bspb.org

Local authorities:

Natural History Museum of Kotel (NHM – Kotel) – is a municipal structure that will be responsible for the education activities and local people awareness rising on the project. Also some experts could take part in the field activities, research and studies. The education

aviary that was built in the Museum's backyard will be used for housing there some vultures that also could reproduce and provide youngsters for release in the wild.

Municipality of Kotel – is the local authority the legal administrative authority in Kotel Mountain. The Municipality of Kotel is supporting the project and has built the aviary in the Natural History Museum's backyard in Kotel. The Municipality is also responsible for improvement of the infrastructure and tourism development that could be related with vultures observation and respective conservation support.

Sinite Kamani Nature Park administration – the park administration is situated in the town of Sliven. It is a department of the Ministry of Forestry and Agriculture responsible for the administrative and operational Nature Park functioning. It is responsible for conservation and management of the park. There are biology and ecology experts employed in the administration as well as guards. They own field cars and could support the field work.

After 20 years of vulture conservation mainly in Western Europe the Black Vulture Conservation Foundation (BVCF) and Foundation for the Conservation of the Bearded Vulture (FCBV) decided at their board meetings in 2001 to make a new and intensive approach towards vulture conservation south Eastern Europe. The Action Plan for the Recovery and Conservation of Vultures on the Balkan Peninsula (Balkan Vulture Action Plan – BVAP) is being encouraged and made possible by Frankfurt Zoological Society (FZS), which has set new priorities in nature conservation in Eastern Europe. Since 2002 the BVAP has been developed, many local NGO and Governmental organisations were involved and projects in all target countries started. Memorandum of understanding for conservation of the vultures was singed in Bulgaria as the Ministry of Environment and local and international NGOs got united in the common goal of protecting and restoring the vulture populations in the country as part of the Balkan initiative.

One of the participating NGOs in the BVAP from its very beginning is the Fund for the Wild Flora and Fauna (FWFF), a Bulgarian NGO working on conservation of threatened species, having a good expertise in the conservation and management of vultures and the birds of prey. FWFF was working for conservation of the vultures since its establishment in the year of 2000. But the BVAP opened a new page in the history of the NGO connecting it with the most experienced vulture experts in Europe.

The FWFF has started to import and to evaluate the captive breeding of Griffon Vultures in Bulgaria for the purpose of re-introduction. One bird was imported from Jerez Zoo- Spain and one from Zoo de Doue – France. A relationship with the Sofia Zoo was developed to improve the breeding of the captive bred vultures in the Zoo.

In the year of 2003 FWFF has started a project for education of local people and raising their awareness for vultures and nature conservation in Kotel Mountain. The first acclimatization aviary was built in the Yurushki skali protected area near Kotel and the first two vultures were set inside on an official event. Many local people and Municipality officials participated in the event. Since than the information for the vultures and their re-introduction in the area is permanently updated and the local community has fully accepted it. In the autumn of 2005 three more birds have been placed in the aviary. Soon after one of these escaped and was wandering in the area for more than a month- engaging the attention of the local community. Many signals for observation of the escaped Griffon were received. Some people intended to feed it next to their sheep barns, etc.

The bird was recaptured by local person in a lake near the village of Lovets- 20 km NW from the aviary and was returned to the cage. This case showed us that the local people are prepared for the releasing process and support the return of the vultures in the area.
In 2003 in the frame of BVAP, FZS has financed the preparation of the current Viability Study for Reintroduction of the Griffon Vulture in Eastern Balkan Mountain. Recently within the BVAP, FZS and DBU are supporting the feeding of the vultures in the aviary and maintaining of the feeding site in Kotel Mountain.

Preventive measures are continuing - including raising the public awareness and providing of guarding dogs for shepherds. The FWFF has discovered that food availability depends on some management measures that would be taken when the re-introduction starts. It was found that there is plenty of food in the area, but is hardly accessible for vultures, however this could be managed when necessary. FWFF for more than three years is maintaining a feeding place and acclimatization aviary for Griffon Vultures as in more than 50 % the carcasses are ensured from local stock breeders. Most of these carcasses would not have been available for vultures without FWFF intervention. However this seems to be manageable probably like in the Grand Causes in France or with establishment of "*muladares*" like in Spain.

Natural History Museum of Kotel is also involved in the activities. In its backyard an aviary for Griffon Vultures was build by the Municipality of Kotel and it is used as demonstration cage for education and public awareness activities.

Figure 9. The education and PR aviary in Museum's backyard in Kotel

The FWFF holds a herd of 400 sheep and goats in the vicinity of the vulture acclimatization aviary in Kotel Mountain.

Figure 10. The FWFF's sheep herd is grazing just next to the aviary and the cliffs in Kotel

The herd is consisted of Karakachan sheep. When available, the carcasses are provided for food of vultures.

The shepherds are used also for guarding the aviary and the vultures. In the year of 2005 FWFF has purchased an old sheep barn near the aviary and so together with the aviary and vultures it became a complex. In the year of 2006 FWFF has implemented a project for restoration of the transhumance in Eastern Balkan Mountain supported by GEF-SGP. Also FWFF purchased about 100 ha of meadows and pastures in a project supported by EECONET Action Fund. Three NGOs and one Nature Park administration are recently active in vulture conservation and re-introduction activities in the Eastern Balkan Mountain. Out of this the State Game reserve in Kotel are willing to re-introduce the Chamois (*Rupicapra rupicapra*) in the area. They also support the FWFF for the re-introduction of Griffon Vulture.

In March 2006 the BVAP's Re-introduction committee has visited Kotel area.

The reintroduction committee of the BVAP consists of experts of the Frankfurt Zoological Society (FZS), Black Vulture Conservation Foundation (BVCF) and the Foundation for the Conservation of the Bearded Vulture (FCBV) namely:

Wolfgang Fremuth (FZS, BVCF), Michel Terrasse (BVCF, FCBV, LPO Mission Rapaces), Hans Frey (BVCF, FCBV), Jesus Garzón (BVCF), Juan José Sánchez (BVCF), Evelyn Tewes (BVCF), Alvaro Camiña (EGVWG).

Figure 11. The BVAP Reintroduction committee and local collaborators in Kotel Mountain. March 2006.

On its briefing in Ministry of Environment few days after visiting the Balkan Mountain the Committee announced its decision for suitability of the area and recommended a start of the activities for re-introduction as soon as possible.

The team leaders of the reintroduction projects of BVAP have participated in May 2006 on a seminary on reintroductions in the Grands Causses, France, with theory lessons and practical exercises organized by the BVCF, the LPO Mission Rapaces and Birds of Prey Protection Society (BPPS), financed by European Commission.
The BVCF is organizing the availability of vultures and is in charge of the distribution of them to the different projects. The BVCF has already started the administrative procedure (CITES, etc.) for the transfer of the Griffon Vultures.

In Sliven area, where the Green Balkans are active a feeding site has been established in the "Sinite Kamani" Nature Park and a release cage is also in process of establishment.

37. Time table, Budget and responsibilities

N	Activity	Period	Executor	Budget in Euro	Source
1	Education Campaign	2007- 2016	FWFF, NHM - Kotel, "Sinite Kamani" Nature Park, Schools, NGOs	15 000	FWFF, NHM-Kotel, BVAP, FFI, Kotel - Municipality, MoEW, MAF, others
2	Acclimatization Cage	2007	FWFF	6 000	Vienna Zoo, others
3	Second acclimatization cage	2003	FWFF	available	Ebeltof Zoo, Vienna Zoo
4	Education Cage	2006	Kotel Municipality	available	PHARE
5	Import and captive breeding of birds for releasing	2007- 2016	FWFF, WRBC-Green Balkans Sofia Zoo, NHM - Kotel	40 000	BVCF, BVAP, MoEW, FWFF, Green Balkans, others
6	Guarding	2007- 2016	FWFF, NHM-Kotel, Game Breeding Station - Kotel	32 000	FWFF, BVAP, Kotel Municipality, Game Breeding Station – Kotel, others
7	Feeding	2007- 2016	FWFF, NHM - Kotel	18 000	FWFF, BVAP, Vienna Zoo, Kotel Municipality, others
8	Releasing	2008- 2012	FWFF	15 000	FWFF, BVAP, others
9	Monitoring	2007- 2016	FWFF, NHM -	6 000	FWFF, BVAP,

			Kotel, NP Sinite Kamani		MoEW, MAF, others
10	Study	2007- 2016	FWFF, NHM-Kotel, NP Sinite Kamani	-	-
11	Marking	2007- 2012	FWFF, NHM-Kotel	500	FWFF, BVAP, EGVWG,
12	Radio tracking	2007- 2013	FWFF, NHM- Kotel	18 000	FWFF, BVAP, others
13	Tracking in the country	2007- 2016	FWFF, BSPB, Green Balkans, NP "Sinite Kamani"	-	-
14	Tracking abroad	2007- 2016	FWFF-Macedonia, MES, WWF- Greece, EGVWG	-	-
15	Tourism development	2007- 2016	FWFF, NHM - Kotel, Kotel Municipality	120 000	FWFF, BVAP, Kotel Municipality, others
16	Cars and trailers	2007-2016	FWFF, NHM - Kotel	8 000	BVAP, FWFF others
17	Total	2007- 2016	-	278 500	-

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VIABILITY STUDY

on reintroduction of the Griffon Vulture (*Gyps fulvus*) in Stara Planina Mountain

Vrachanska Mountain Reintroduction Site

BVAP
Balkan Vulture Action Plan

BIRDS OF PREY PROTECTION SOCIETY

October 2006

Viability study of the potential for reintroduction of the Griffon Vulture (*Gyps fulvus*) in the Vrachanska Planina Mountain (Vrachanski Balkan Nature Park), Bulgaria

Prepared by the Birds of Prey Protection Society (BPPS)

2006

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Table of contents:

1. Introduction

Until the beginning of the 20th century, the Griffon vulture (*Gyps fulvus*) and the rest tree European vulture species were presented by numerous populations on the territory of the continent including the Balkan peninsula. Feeding on carrion they have played an important role in the natural balance, preventing the spread of dangerous diseases. With the development of the traditional livestock breeding and the decrease of the populations of wild ungulates in Europe the vultures become very much depended on human bred animals (27, 28). Realizing the vultures contribution to the old time hygiene the men deeply respected them and lived in peace with these natural sanitarians for centuries. It was not that long ago when people from the country would drive their dead cow to the close hilltop and live it to be cleaned by the vultures. Because of their role and impressive outlook many nationalities accepted these birds as sacred creatures and symbol of greatness along with the eagles.

In the end of 19th and the beginning of the 20th century the fate of the vultures turned dramatically. Almost all over the continent they were officially proclaimed as pests along with all the raptors, and brutal persecution took please. They were hunted and killed in various ways but still it was hard to destroy hundreds of thousands of birds.

The popular by that time use of poisonous meet bites against carnivores came to be the worst weapon against vultures and raptors even though it was not meant for them. They were gathering in big numbers to a single poisoned carcass to die minuets after had a bite.

Around the middle of the 20th this fearsome practice along the livestock breeding reform inflicted a final strike on the vultures and bring them all four to the edge of extinction from the European fauna.

That same scenario was applied on the Balkan Peninsula – an important part of the species's European former areal. The vulture decline didn't pass our country – Bulgaria, where these remarkable birds once bred in thousands, enjoying the suitable habitats and favorable living conditions.

Over the middle of 20th sentry the Griffon vulture got extinct from Bulgaria as a nesting species. The main reasons here was again the poisonous bites the reducing of the traditional ways of livestock breeding. In a short term the same sad fortune was shared by the other two large vultures the Black and the Bearded.

In 1978, a small Griffons colony was discovered in Eastern Rhodope Mountain, in the southern part of the country near the border with Greece. Throughout the years that followed thanks to the continuous efforts for conservation of the species their number slowly increased. Today it is about 130 birds and 33 nesting pairs but without increase in the last few years. The only Bulgarian colony gave us hope to the future of the species here but still the isolation and occasional human disturbance are limiting factors for the population to increase.

The future of the Griffon vulture in Bulgaria, as well as on the Balkan Peninsula remains unstable and unpredictable. Despite the fact that some of the threats do not exist anymore or are reduced to a very small scale, the population is fragmented and insufficient. While suitable habitat remains, there are not enough birds to re-colonize naturally their former breeding sites. Resolute conservation aid is needed so this remarkable birds to survive and remain part of the Europe's natural heritage.

The Viability Study presented here surveys the resources and the potential of Vrachanska Planina Mountain, Bulgaria to sustain a reintroduction of the Griffon vulture.

2. Objectives

• To assess and estimate the features of the area and can they sustain reintroduction of the species.

• To define the possible threats which can affect negatively the reintroduction process.

• To improve the general environmental conditions for the vulture populations in the region and to establish self-sustainable population of the Griffon vulture.

• To enhance to long-term survival of the species in the country as a whole.

• To connect the Bulgarian and the Serbian population and thus to enhance the population of the species on the Balkan Peninsula.

• To improve significantly the BPPS' institutional capacity and to deliver experience, know-how and skills to the BBPS' staff for potential reintroduction activities with the Bearded vulture in the future.

3. About the species

3.1. Biology

Order: *Falconiformes*.

Family: *Accipitridae*. (Old World vulture).

Scientific Name: *Gyps fulvus.*

Common Names: Eurasian Griffon or Griffon Vulture.

Conservation Status: Threatened. Reduction in numbers due primarily to a lack of food. Still reasonably abundant in Spain; virtually extinct in Sicily. Balkan numbers have also diminished greatly.

Geographical Range: Asia, northwestern Africa, India and Turkey. Very small numbers in the Balkans, Sardinia, Cyprus, Crete, and Sicily. Even in very cold areas, Eurasian Griffons are resident throughout the entire year and have a special metabolism which enables them to conserve the needed energy to survive the worst winters.

Habitat: Rocky coasts, or mountainous regions with open areas.

Physical Characteristics: The Eurasian Griffon is about 100 centimeters long and has body plumage which is predominantly brown. Wings and tail are black while the neck and head are of a white down. The base of the neck has a collar of creamy white feathers and the bird is able to withdraw its entire two-foot long neck and head into this ruff. Immature birds can be easily distinguished as this collar remains brown until maturity. The Eurasian Griffon croaks, growls and whistles, but will do so only at feasts and in family groups. Flight is always done in complete silence.

Flight: Griffons can soar for 6 to 7 hours, or 100 miles. They often require steep cliffs or mountains to aid them in taking off. It can soar as high as 3300 meters, but has been recorded at hights of up to 9000 meters. Descending on a carcass, the bird can dive at over 100 miles per hour. They are one of the fastest species of vulture.

Food: Like other vultures it is a scavenger, feeding mostly from carcasses of dead animals which it finds by soaring over open areas. It often moves in flocks. They find food by soaring high, scanning the land for signs of a kill, or for stationary bodies. Often, the vultures will wait on the outskirts of a feeding frenzy, closing in once the mammalian scavengers have gone. Their weak beaks are not designed for ripping open fresh hides. They depend on predators or larger vultures to begin the work for them. Once they can access a carcass, the vultures will gorge themselves. At each meal the birds will gorge themselves on up to 5.4 kilograms of carrion. Once satisfied and have the crop, throat and neck are distended, they relax back on their tails, wings spread to provide balance and mouth hanging open. It will be

about an hour before the meal is digested enough for the birds to take flight once more and the takeoff is very labour-intensive involving much running and leaping across the plains.

Reproduction: Nests in the hollows of rocks, on cliff ledges or in caves, usually in colonies. The single egg is white with red spots and takes between 48-54 days to hatch. The female Eurasian Griffon will rarely leave the nest from he time of laying the egg until her young has taken flight. Consequently, the male vulture must provide food for all of them. He settles on a nearby ledge and regurgitates food, sorting out the contents with his beak. The female takes the larger pieces for herself and feeds the smaller pieces to the whistling chick. The young develop plumage at around 70 days and first fly at 110-115 days.

Behavior: Griffons are very social, living and nesting in colonies of 15 to 20 pairs. Sometimes more than 100 pairs compose a colony. After feeding on a carcass, Griffons often gather at a watering hole to bathe. They are dominant over most of the other vultures in their range, except the cinereous and lappet-faced vulture.

Life Cycle: Griffons are mature enough to breed after 7 years, and live around 40 years.

3.2. Distribution in Bulgaria and in the neighbouring countries

In Bulgaria there are about 130 birds inhabiting the Eastern Rhodope Mountain (270 km southeastwards of the Area). They are divided into two separate colonies – near the town of Madzharovo and around the Studen Kladenetz reservoir, with a total number of 31 pairs (2004).

The distance from the nearest Serbian colonies is about 200 km. There is some data that in eastern Serbia, close to the Bulgarian border, there are isolated breeding pairs, or small colonies, but we consider this information as unreliable. According to Dr. Bratislav Grubach (personal data), here are no breeding pairs in this area, but single birds are observed frequently.

The distance to the nearest breeding colonies in Macedonia is about 170 km.

3.3. Historical data

Dinev (1943) cites information by elderly local people from the village of Milanovo (situated in the high southern part of the Vrachanska Mountain) that during the extremely heavy winter of 1870, many wild animals in the region died. Then, around a carcass of a dead animal, around 100 “eagles” were observed (under the collective name “eagles” the people in Vrachanska Mountain mean the Griffon vulture and the other large birds of prey). During the additional talks with local elderly people in 2005, the following information about the past distribution of the Griffon vulture has been gathered:

- Record of Stefan Yordanov, 94 years old, citizen of the village of Dolno Ozirovo: the highest number of Griffon vultures was detected in the period 1938-1940: about 5-6 birds per carcass, as well as couples, nests along the rock ridge eastwards above the Dolno Ozirovo village in the “Orlovi Dupki” locality. After the 50s of the XX-th century, the Griffon vultures disappeared. As a whole, the above area and the region around it are present in the testimony of many elderly people of Dolno Ozirovo, Gorno Ozirovo and Lyutadzhik, as a place for Griffon vultures’nesting in the past. Obviously, these particular parts of northern Vrachanska Mountain attracted the biggest number of nesting couples of the Griffon vulture.

- Record of Antonio Lazarov, 90 years old, citizen of Dolno Ozirovo: 2-3 to 5-6 Griffon birds were seen most often during the 40s of the last century and much more rarely in the 50s. After 1957 these birds completely disappeared from the region of Dolno Ozirovo. Most often, birds were feeding on carcasses thrown near the cattle pens westwards from the village and around the rocks eastwards above the village. Several times in 1948-1949 Griffon vultures were found poisoned (a total of 10 birds near the village), lying by carcasses

where strychnine was spreaded on. A forester was visiting these particular places and was collecting the dead vultures and other birds.

- Record of Lazar Stamenov, 91 years old, huntsman since 1931, citizen of Dolno Ozirovo: Very often a different number of Griffon vultures (most often around 5-6 birds) could be seen feeding on carcasses in the areas northwards and eastwards above the village. They nested on the rocks in the "Orlovi Dupki" locality and in other parts of the rock massif situated north-eastwards above the village of Dolno Ozirovo. These observations are from the period of 20s, 30s, 40s and up to the mid-50s of the XXth century. The Griffon vultures' population decreased considerably during the 40s of the XXth century, and in the 50s they completely disappeared. There is a traditional folk song popular in the region of this village about the "white eagle" (the local name of the Griffon vulture).

- Record of Petar Velin, 80 years old, citizen of Gorno Ozirovo: Up to 10-15 Griffon vultures could be seen gathering on carcasses around the rocks northeastwards above the village of Gorno Ozirovo in the period 1944-1956. Dead Griffon vultures were found several times near carcasses with strychnine, which was set in for killing wolves. After the end of the 50s of the XXth century, the Griffon vultures disappeared. Until the 60-70s of the XXth century the Egyptian vulture was numerous and common during the nesting period in many regions around the village of Gorno Ozirovo. After this period the Egyptian vulture decreased drastically and could be met much more rarely than before.

- Record of Ivan Ivanov-Shilov, 87 years old, citizen of Gorno Ozirovo: Around 1938 a friend climbed on branches and woods in shallow caves, situated on the plummet rocks in the "Orlovi Dupki" locality. The aim was a treasure hunting, because there was and old legend saying that a treasure is hidden under the "eagles" nests. Many bones and feathers from dead "white eagles" were found but no any treasure.

- Record of Georgi Mladenov, 61 years old, citizen of Gorno Ozirovo: His great-grandfather has been breeding about 100 horses around the year 1900, in the mountain northeastwards above the village. When some of the horses died, dozens of Griffon and Egyptian vultures gathered. In the period around 1950-1954 he has seen approx. 20 Egyptian vultures to gather on a carcass eastwards from the village around the rocks, especially in the area "Ispiiski Kladenetz". After the 50s of the XXth century, this species decreased drastically and one could rarely see any separate birds or couples. No memories of seeing Griffon vultures, but even if there were such birds in the 50s, they would be too rare and almost extinct in the region.

- Record of Vlado Ivanov, 83 years old, citizen of Lyutadzhik: In the 40s of the XXth century 5-6 up to 10 Griffon vultures could be seen to gather around a dead animal near the village. In the 50s of the XX-th century Griffon vultures were observed exactly above the village, in the region of the Ledenika Cave.

- Record of Nikola Grigorov, 85 years old, a citizen of Lyutadzhik: Around 1945, about 5-6 Griffon vultures were seen around a carcass, east from the village, around the Stresher peak in "Kravyie" locality.

- Record of Stoyan Zarchev, 75 years old, a citizen of Lyutadzhik: In the region of the peak Sokolotz and the "Kobilni Steni" locality – on the northeast and east above the village of Milanovo Griffon vultures were seen near dead animals. In the 60s and 70s of the XXth century, from 1-2 to 3-5 could be seen, and in the end of the 70s up to 1984 – 1 to 3 at most.

- Record of Nikola Yanev, 82 years old karakachan shepherd, citizen of Vratza, "Kostalevo" district: Around the middle of the 60s of XXth century, separate birds were seen around the rocks in the "Manastirski Dol" locality, on the south above Vratza.

- Record of Mihail Kostov, 82 years old karakachan shepherd, citizen of Vratza, "Kostalevo" district: 20 to 30 Griffon vultures could be often observed together at a dead carcass on the south above the town of Vratza, in the region between the Skaklya waterfall

and the Orlovetz peak. The Griffon vultures were nesting on the rock ridges in the region of the waterfall and the Vratzata gorge. This was in the 30s and the early 40s of the XXth century. Afterwards the family left the region together with the cattle, somewhere in the end of 1942. In the early 40s, the Griffon Vultures suddenly decreased in number, and became extremely rare in this region. No any poisoned birds were found, but it was very common case to see people setting poisonous baits for wolves which were numerous at that time and often attacked the domestic animals grazing in the mountain.

Photo 1. Karakachan family

The earliest published scientific information about Black vulture presence in the mountain (8) describes the nesting of this species on cliffs in the southern edge of Vrachanska Planina Mountain.

Common data for the Griffon vultures provides Patev (1950) who wrote that being “abundant species in the past, in the present days the Griffon Vulture is declining and rare, especially in the last years.”

In the scientific publications, the first certain data about the Griffon Vulture presence in Vrachanska Planina mountain dates back to 1986, where in June and July several birds were observed (24).

Based on this finding, Yankov (1991) and Boev (1981) considers the mountain as a place featuring high possibility of breeding Griffon vultures’ pairs presence. In their study, Milchev and Georgiev (1998) did not record the species as occurring in the mountain at the time of their study (1993 – 1995). However, for the same period BPPS has reliable data for observation of the species by local people – most of all around the main cliff massif close to “Ispiiski kladenetz” spring area, 5 km northwards of the village of Gorno Ozirovo.

In 1997, one juvenile bird was caught close to the village of Lik, 15 km away from the eastern edge of the mountain (Stoynov, personal data).

3.4. Present situation

In Table 1 are presented the collected data about the Griffon vulture presence in the Vrachanska Planina Mountain during the period 2000 - 2005.

Table 1. Observations of the Griffon vulture presence in the Vrachanska Planina Mountain

No	Date	Area	Observation	Observed by
1.	27 May 2000	5 km north from village Gorno Ozirovo	1 ad. bird flying above the main cliff massif close to “Ispiiski kladenetz” spring area,	Georgi Stoyanov and Dobromir Domuschiev
2.	The summer of 2001	close to “Ispiiski kladenetz” spring area	3 birds feeding on a calf carcass	local people
3.	May 2002	close to the village of Milanovo, “Korita” locality	1 bird flying above a shepherd house	local people
4.	October 2002	close to the village of Lyutadzhik	1 bird on peak “Sokolo”	local hunters
5.	10 April 2003	close to “Ispiiski kladenetz” spring area	3 birds feeding on horse carcass disposed by BPPS	local people and local BPPS’s volunteer
6.	15 May 2003.	close to “Ispiiski kladenetz” spring area	2 birds feeding on horse carcass disposed by BPPS	Georgi Stoyanov
7.	16, 17, 18 May 2003	close to “Ispiiski kladenetz” spring area	1 bird continuing to feed on the carcass	Dimitar Dimitrov (volunteer) and other local people
8.	August 2003	close to “Ispiiski kladenetz” spring area	These birds were continuously observed in the area until the beginning of August 2003	local people
9.	31 July – 01 August 2003	close to peak “Streshero”, eastwards of the village of Lyutadzhik.	4 to 5 “huge, white eagles” were observed flying	local people
10.	October 2003	between the villages of Druzhevo and Milanovo	1 bird feeding on dog carcass	local hunters

11.	In the beginning of November 2003	close to the village of Dolno Ozirovo	1 bird lend in agriculture field, close to the road, 300m away of the village of Dolno Ozirovo	the local Mayor – Mr. Angel Petrov
12.	From the end of February to the beginning of March 2004	close to the village of Gorno Ozirovo	One single and 2 other birds feeding on donkey's corpse	local people
13.	1 July 2004	the village of Zgorigrad	1 bird flying above the village	observed by the BPPS' member Ivailo Petkov
14.	The beginning of July 2004	the main massif east of the village of Gorno Ozirovo	a single and 2 other birds observed around the main cliff massif	Dimitar Dimitrov
15.	11 July 2004	Golema Lokva peak	1 flying bird	Georgi Stoyanov
16.	October 2004	the plain region between the towns of Berkovitza and Montana.	one bird killed by firearm of poachers	this information is provided by the local people and, according to BPPS (after a survey made in the second half of 2005), it cannot be considered fully reliable
17.	The end of June 2005	the cliffs over the Bistretz quarter of Vratsa	a flying bird observed by a local man	a local man
18.	17 May 2005	"Ispiiski kladenetz" spring area	One bird observed over the sheep pen flying from southeast to northwest	Dimitar Dimitrov
19.	05 June 2005	the village of Bohot (Pleven Municipality). This region is situated in the Danube plains, about 90 km eastwards from the Vratchanska Mountain	Two vultures on a dung-hill near poultry abattoir	Rossen Tzonev

Photo 2. Interview with Mr. Nicola Grigorov

Photo 3. Interview with Mr. Emil Philipov

Photo 4. Mr. G. Stoyanov interviews Mr. Lazar Stamenov

3.5. Reasons for extinction from the area

The reasons for extinction of the Griffon Vulture are the same as in the other parts of the country. There are 3 main reasons for the disappearance of this species in the concerned region: poisoned bait, hunting and decrease of the food supply.

- Poisoned baits: The use of poisoned strychnine baits against the carnivore mammals was the death cause for thousands of birds. This was the case from the 20s until the beginning of the 70s of the XXth century.

- Hunting: The second main reason was shooting, especially in the period 1940-1970. This data originates from some older local people, but any documents which could eventually show the exact number of killed birds are missing.

- Decrease of food supply: For centuries the main means of living for the local people were agriculture and stockbreeding. The nationalization and collectivization of the land properties in rural Bulgaria was done between the mid- and late 50s of the XXth century. This resulted in resistance and unwillingness of people to breed animals because of the lack (and prohibition) of private land ownership. A mass migration of people from the provincial regions to the cities took place. After 1950, the number of animals (mainly sheep, cows, horses and goats) were continuously a subject of reduction by the local farmers, and the breeding practices were changed, too. The new livestock breeding was started in a different kind of farms, many of them concentrated in the villages or in their close vicinity. Particularly for the region of Vrachanska Mountain, hundreds of small stockbreeding farms (cattle-pens), which were scattered all around the mountain, disappeared. After 1990, an attempt to return to private agricultural property in the rural regions was undertaken as a result of the political and economic changes in the country. Yet in some parts of the mountain new state stockbreeding farms were built, but in general the number of animals there is several times less than the number of animals bred before the nationalization and collectivization times. A new very strong migration wave to the cities and also migration abroad unseen before started after 1990. It resulted in constant decrease and ageing of the population in the rural regions, and particularly around Vrachanska Mountain. At present, enormous agricultural lands are desolate. For example, data of 2005 shows that 68% of the agricultural land in the Montana region is desolate, and for some particular villages this number is even above 80-90%. Just 5 is the number of the cultivated plants – as compared to more than 20 in 1990.

Other negative factors were:

- the destruction of some easily accessible nests by the local chioldren,
- easy killing the overfed vultures being too heavy to fly away quickly.

However, these factors had minor impact compared with the others.

4. Reintroductions

Throughout the last tree decades, a number of successful reintroduction projects have been implemented in Western Europe. Thus was initiated the return of the vultures to some of its formerly extinct populations or near to. Due to reintroduction programs some viable vulture colonies are already established in Spain (13, 6) and France (11, 42). Now they have become a source of birds for new reintroduction projects themselves. Successful reintroduction and restocking projects were also aimed to the other two large European vultures – the Black and the Bearded. Recently the forth member of the family - the Egyptian vulture was also included in the conservation activities.

The most outstanding projects are the reintroduction of Griffon Vultures in Grand Causses in France (LPO, started 1981, established colony of 140 breeding pairs); the reintroduction of Bearded Vulture in the Alps (FCBV, started 1986, seven breeding pairs in 2003); the restocking of the nearly extinct Black Vulture population in Majorca (Spain, the Balearic Government and BVCF, started 1984, the population increased from less than 20 birds to 90 in 2002 and from 0-1 breeding pair to 10); and reintroduction of Black Vulture in Grand Causses in France (LPO and BVCF , 1992 - 2002, resulted in 60 birds and 13 breeding pairs). Actually, there are other projects being carried out based on these former experiences. The reintroduction of Black Vulture continues in Frances in two more sites: Baronnies in Pre-Alps (started in 2004, by Vautour en Baronnies and BVCF) and in Verdon (2005, by LPO, PACA and BVCF). BVCF is also promoting together with Fundació Territori i Paisatge and the Catalan Government, the reintroduction of the Black Vulture in pre-Pyrenees.

The successful experience with all four vulture species in western Europe logically brought the attention to the vultures status on the Balkan Peninsula – once comprising an important part of the European population. After the research it was decided that special conservation activities are needed there too.

In the year of 2002 the “Action Plan for the Recovery and Conservation of Vultures on the Balkan Peninsula and Adjacent Countries” (41) was approved as a joint effort of national and international NGOs. Here are involved Black Vulture Conservation Foundation (BVCF), Foundation for Conservation of the Bearded Vulture (FCBV), the Frankfurt Zoological Society (FZS), the Foundation for the Conservation of the Bearded Vulture (FCBV), Ligue pour la Protection des Oiseax (LPO)/ BirdLife France, the European office of the International Union for Conservation of the Nature (IUCN) and BirdLife International and other national NGOs.

The primal goal of the plan, popular as the Balkan Vulture Action Plan (BVAP) is to define, coordinate and support the actions of the organizations working for the conservation of the four vultures species on the Balkans. These include Bulgaria, Macedonia, Serbia and Montenegro, Croatia, and Greece. Recently, Romania, Bosnia and Herzegovina were included.

In addition, it seeks to use the vultures as flagship species for the conservation of biodiversity in the Balkan area, transferring the technology and experience in respect of conservation from the West to the East. The strategy is based on local and international cooperation, in which international organisations provide expertise and funding, while local organizations, governmental and non-governmental, carry out the projects.

On the Balkans, viability studies on potential reintroduction projects have been recently carried out by six different Bulgarian and Macedonian NGOs that have requested their need for training and capacity building in reintroductions. Same sort of projects, apart from their interest for the recovery of the populations, have a great awareness impact, and may be very useful to enhance the local awareness and information process. BPPS has been one of the first NGOs in sending drafts of viability studies to the BVCF, and has also

organized a visit of the Balkan NGO preventatives involved in the vulture conservation to know and learn from the vulture reintroduction initiatives of LPO in France. Beside this, BPPS has developed two previous projects for BVCF in the framework of the Balkan Vulture Action Plan, with very good outcomes.

Bulgaria is the country where the implementation of the BVAP is one of the highest. Several NGOs are active participants in the activities, with four of them (including BPPS) having particular projects for conservation of vulture species, covering practically most of the territory of the country.

In May 2005, a Memorandum of Understanding was signed between the BVCF, FCBV, FZS, LPO/BirdLife France, seven Bulgarian nongovernmental environmental organizations (including BPPS), and the Bulgarian government represented by the Ministry of Environment and Waters. Thus, the Bulgarian institutions declared their support for the BVAP mission, goals and activities.

Initially the BVAP idea was to stimulate the natural re-colonization of the vultures through expanding of the existing populations by just eliminating the negative factors. However, the results from the first years of research have led to the conclusion that the minimum number of individuals that is necessary for natural recovery doesn't exist anymore so it is unlikely to happen in the future.

That led to the decision for reintroduction as the only remaining possibility for recovery of the Balkan vulture population.

An important part of the BVAP strategy is to start with the reintroduction of the Griffon Vulture, and thus to create favorable environment for the Black and the Bearded vulture (with even more fragile status) to be reintroduced here too.

Stara Planina Mountain (Balkan Mountain) with its location, crossing the whole territory of the country from west to east Balkan mountain range, is of strategic importance for the Recovery of the Griffon Vulture on the Balkan Peninsula. It is a natural corridor that will connect the existing colonies in western Serbia with those of the eastern Rhodopes and Greece by re-establishing historic Griffon colonies located in between.

5. The locality (Vrachanska Mountain area)

5.1. Geographic location

Vrachanska Planina Mountain is situated in Northwestern Bulgaria, northwards of the main Balkan range and westwards of the town of Vratza (see Map 1). The territory of Vrachanska Mountain is situated on the north from the main range of Western Stara Planina Mountain, between 43 and 44 degrees northern altitude and between 28 and 24 degrees western longitude (15). On the east, it borders with the Mezdra Hills region, on the west – with the Druzhevska saddle (Doupnivrashki pass) and Botunya river. On the north is the Vrachansko Pole lowland, and on the south are the Stara Planina mountain and the Iskar Gorge.

The mountain has NW-SE position. It is about 30 km long and 15 km wide. The total territory is 355 sq.km. Vrachanski Balkan Nature Park's territory is 288. 5 sq.km (43). The lowest point is at 350 m a.s.l., and the highest at 1 482 m a.s.l. (peak "Beglichka mogila"). VPM is separated into three main ridges – Beglichki on southwest, Bazovski on east and Stresherski on northwest. The widest (and highest) is the Beglichki part, where the highest peak in VPM is to be found – Beglichka Mogila (1482 m). The second biggest is the Bazovski ridge where the highest peak is Bazova Mogila (1313 m). The Stresherski part is the smallest in territory and it reaches its top altitude at Streshero peak (1215 m).

5.2. Geomorphology

The entire massif of the Vrachanska Planina has a Karst geological structure and features a large number of vertical rock formations, single rocks, screes, wreaths, clint fields. Many of the rock massifs are difficult to reach due to their natural protection by steep screes and vegetation formed by tree and bush species (10, 45). The ridge areas are covered by large grasslands. The altitude varies between 300 and 1482 m (peak Beglichka Mogila). Here is situated the Vratzata gorge, which has a Karst structure and features more than 400m high rock vertical . These are the highest limestone verticals in the Balkan peninsula, and in the same time the highest pure verticals at such an altitude above sea-level in Europe. Additionally, there are plenty of cliffs, single rocks and rocky areas. Here is the longest mountainous cliff massif in Bulgaria – about 6 km long, with some parts exceeding 100m in height.

The region of Vrachanska Planina Mountain is one of the places in Bulgaria where one can observe typical three-layered Karst. The overall depth of the karst layers reaches about 1300m. A distinctive feature of VPM is the abundance of Karst formations in the limestone – Karst fields, hollows, pot-holes, etc. The rivers Leva, Zlatitza and Cherna are full-bodied all year round. The rest rivers and streams are much more dependent on the precipitation and snow-melting in the VPM. In the foothills of VPM there are a number of Karst springs fed from water soaking through the open Karst and the numerous underground channel-passage systems.

5.3. Climate

The climate in the VPM features big variability and quick changes. The climate is a mixture between sub-continental and montane climate zones. The average annual temperature is +7 degrees centigrade. The average temperature for January is +1.6 degrees centigrade. Temperatures lower than -10 degrees are registered very rarely. During the winter, there is a striking difference between the temperatures and the snow coverage because of the hills exposition of south and north. At lower altitudes, the snow cover stays about 50 to 60 days, but at highest altitudes – 80 to 100 days.

Map 1. The location of Vrachanska Planina Mountain on Balkan Peninsula

The spring comes relatively late and it is cold. The summer is hot, especially under 1000 m a.s.l. Characteristic for the Vratza valley (eastwards of the mountain) are the long-staying thick fogs, but in the mountain they are more rare and short-lasting.

The winds are mainly (65%) of NW-SE direction. In some cases (in early spring and late autumn) the so called “feuhn” winds blow. The rainfall peak is May – June, the driest months are February and August. The average amount of rainfalls is 1000 mm.

5.4. Flora

At the territory of the VBNP there are 983 higher plant species confirmed (22.5% of the Bulgarian flora), representing a total of 99 plant families. There are 6 Bulgarian (Table 2) and 44 Balkan endemic species . 57 species are included in the Bulgarian Red Data Book, 28 are listed in Appendix II of the CITES, and 3 are in Appendix I of the Bern Convention.

Table 2. Bulgarian endemic plant species in VBNP (10).

No	Species	Family
1	Centhranthus kellereri (Stoj. Stef. et T. Georg) Stoj. Et Stef.	Valerianaceae
2	Chamaecytisus kovacevii (Vel.)Rothm.	Fabaceae
3	Chamaecytisus neiceffii (Urum.)Rothm.	Fabaceae
4	Festuca balcanica (Acht.) Markgr.-Dannb.	Poaceae
5	Oenanthe millefolia Janka	Apiaceae
6	Silene velchevii D.Jord. et P. Pan	Caryophyllaceae

The overall territory of VBNP is 30,129.9 ha. The forested area (16,087.1 ha) represents 55.8% of the total park area and is evenly distributed in a range from 150 to 1300 m of altitude. 15,211 ha of these belong to the forest fund, and 876 ha are part of the land fund. The non-production forest area is 11,777.2 ha, and the biggest share of it belongs to the pastures – 3 919.6 ha, followed by the non-forest areas 3 241 ha, meadows 2 275 ha, rocks and cliffs 988 ha.

It should be however noted that few centuries ago forests were considerably larger in the area, especially in the higher parts of VPM. As a result of deforestation and arson, the upper boundaries of the forest were artificially taken down, and terrains for pastures of small and big cattle occupied the released space. In the past, cutting forests for baking lime was popular, too.

The total area of the fixed habitats takes 43.6 % of the territory of the NP. here are 12 habitats included in Appendix I of the EU Habitat Directive 92/43/EEC. 3 of them are of highest priority: Pannonian woods with Quercus pubescens; Petrifying spring with tufa formation (*Cratoneurion*); Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Bromeliata*) (Important orchid sites),.

5.5. Fauna

The fauna in the region of VBNP is characterized by rich bio-diversity. The herpeto-fauna includes 23 species of amphibians and reptiles (out of a total of 52 species for the country). Some of the more important and typical species are the Salamander (*Salamandra salamandra*), the Common newt (*Triturus cristatus*), the Yellow-bellied toad (*Bombina variegata*), the European Tree-frog (*Hyla arborea*), the Iberian tortoise (*Testudo graeca*), the Hermann’s tortoise (*Testudo hermani*), the Snake-eyed skink (*Ablepharus kitaibeli*), the Wall lizard (*Lacerta muralis*), the Green whip-snake (*Coluber jugolaris*), the Viper (*Vipera ammodytes*), etc.

The avifauna at the present moment consists of about 180 bird species, i.e. 42 % of the 428 species registered in Bulgaria (19). Many species that are common in the region are birds nesting at the rock massifs – the Crag martin (*Hirundo rupestris*), the House martin (*Hirundo daurica*), the Alpine chough (*Pyrrhocorax graculus*), the Crow (*Corvus corax*), the Alpine swift (*Apus melba*), the Rock dove (*Columba livia*), the Eagle owl (*Bubo bubo*), the Golden eagle (*Aquila chrysetos*), the Long-legged buzzard (*Buteo rufinus*), the Peregrine falcon (*Falco peregrinus*), and in the near past – the Saker falcon (*Falco cherrug*), the Egyptian vulture (*Neophron percnopterus*), etc. (see Table 3).

From the mammals, 30 species have been recorded, which counts for 33.3 % of the mammal fauna of Bulgaria (around 100 species) (23). There are 19 species of bats in VBNP, 7 species of rodents, 4 species of insectivores, 1 rabbit species, 5 carnivore species, and 2 species of hoofed animals. Some of the more interesting and characteristic are: the Greater horse-shoe bat (*Rhinolophus ferrumequinum*), the Bechstein's bat (*Myotis bechsteini*), rabbit (*Lepus capensis*), wolf (*Canis lupus*), red fox (*Vulpes vulpes*), jackal (*Canis aureus*), the Deer (*Capreolus capreolus*), and the Rain deer (*Cervus elaphus*). There is a reference-based proof that around late XIXth century and the early XXth century the Chamoix (*Rupicapra rupicapra*) could also be found in the south parts of VPM (12).

The territory of VPM is of great significance for the cave fauna conservation. So far, 112 cave-dwelling organisms have been recorded, and the dominating share of them is occupied by local endemic species.

5.6. Protected areas

The protected areas in VPM are the following:

Vrachanski Balkan Nature Park (VBNP) with a total territory of 28 844,8 ha. (of which 20 733,4 ha are forests) (39). It is the second biggest nature park in Bulgaria. Within its territory is situated Vrachanski Karst Reserve with a total area of 1 438, 9 ha and a buffer zone of 623 ha. There is a proposal for enlargement of the reserve.

Besides the reserve, there are some more protected localities in the park, mainly rock formations – about 15% of the park territory of the park.

Apart from Vrachanski Karst Reserve, the protected areas Lakatnishki Skali and Vezhdata fall within its territory, as well as the Ritlite nature landmark, the Ledenika cave and the Vratzata gorge.

In 1997 VBNP is proclaimed a protected nature area with international significance for the conservation of biodiversity and the richness and beauty of nature. VBNP is included in the list of the potential protected zones in Bulgaria that are listed under the European Network of Protected Areas NATURA 2000 (after the country's accession to the EU in 2007),

Photo 5. The rock massif in "Kobilini steni" area

Photo 6. The gorge Vratsata and village of Zgorigrad

Table 3. Some bird species and their status in NPVB

Species	Notes	Nests - yes/no	Units	Number	Trend
Egyptian Vulture *(Neophron percnopterus)*	Migrant	Yes	pairs	1	Disastrous decrease
Griffon Vulture *(Gyps fulvus)*	vagrants	No	individuals	2-3	"beating" presence and absence
Golden Eagle *(Aquila chrysaetos)*	Permanent, vagrant	yes	pairs	4-5	Slight increase
Lesser Spotted Eagle *(Aquila pomarina)*	migrant	yes	pairs	1-2	decrease
Peregrin Falcon *(Falco peregrinus)*	Permanent/ vagrant	yes	pairs	12-14	increase
Saker falcon *(Falco cherrug)*	Spends the winter	yes – up to the 90s of 20th century	individual	1	Disastrous decrease, extinction as nesting
Goshawk *(Accipiter gentilis)*	Permanent/ vagrant	yes	pairs	8-10	decrease
Short Toed Eagle *(Circaetus gallicus)*	migrant	yes	pairs	5-6	stable
Long Legged Buzzard *(Buteo rufinus)*	Permanent/ vagrant/ migrant	yes	pairs	10-12	increase
Buzzard *(Buteo buteo)*	Permanent/ vagrant/ migrant	yes	pairs	Common	stable
Honey Buzzard *(Pernis apivorus)*	migrant	yes	pairs	10-12	stable
Black Stork *(Ciconia nigra)*	Migrant	yes	pairs	6-7	increase
Eagle Owl *(Bubo bubo)*	Permanent/ vagrant	yes	pairs	20-25	Stable/ increase
Rock Partridge *(Alectoris graeca)*	permanent	yes	individual	120-160	Major decrease
Raven *(Corvus corax)*	Permanent/ vagrant	yes	pairs	Common	increase

Photo 7. The “Kobilini steni” cliffs near Milanovo village

5.7. Conservation activities

The VBNP Directorate implements the following activities: information campaigns devoted to the nature conservation in general (mainly amongst the school children), publishing different materials on the topic, establishment of eco-trails etc.

The REWI Vratza is responsible for the supervising and guarding the reserve. It is also the relevant authority regarding any crime related to wildlife and nature.

Since 2003, BPPS started intensive conservation activities in the region, aiming the recovery of the species. The main activities include regular feeding, monitoring the vultures and any birds of prey, information campaigns etc. In July 2004, a feeding site was established near the village of Dolno Ozirovo. Since then, there is a regular feeding taking place there.

5.8. Suitable habitats for reintroduction

Vrachanska Planina is among the amplest regions in Bulgaria when talking about suitable rock massifs for the Griffon vulture. The reason is the presence of vertical cliffs with height ranging from a dozens of meters to 100-200 m. The highest can reach up to 400m of sheer precipice. A big part of the these rock habitats are situated in the altitude range of 100-400 m, and many of the cliff walls have southern and eastern expositions.

The Karst structure of the rocks determines the plenty of holes, caves, rock cornices etc. on the territory of VPM, and makes the rock massifs very suitable as nesting habitats for the Griffon vulture (photos 5 - 20).

Photo 8. Gorge Vratsata - the central rocks (400 m)

Photo 9. “Manastirsky dol” area near Vratsa city

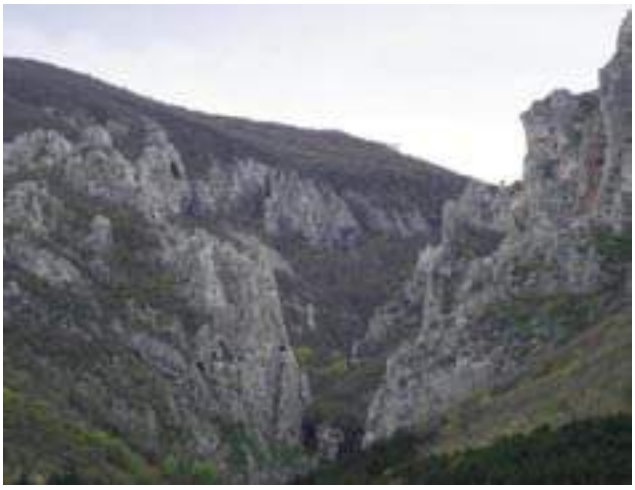


Photo 10. The rocks close to village of Opletnya

Photo 11. Vrachanska Planina Mountain - north side

Photo 12. Peak Stresher near village of Gorno Ozirovo

Photo 13. The cliff massif near village of Gorno Ozirovo

Photo 14. The rocks near Cherepish station.

Photo 15. The rocks near Cherepish station.

Photo 16. Rocks situated between Lakatnik station and village of Opletnya

Photo 17. Rocks situated between Lakatnik station and village of Opletnya

Photo 18. The rocks in “Kobilini steni” area - south side

Photo 19. The Iskar river and Lakatnik station

Photo 20. The cliff massif over Gorno Ozirovo vilage - historical nesting area for Griffon vultures

5.9. Food availability

5.9.1. Livestock

In the past, the livestock in VPM was numerous, and hundreds of thousands of animals inhabited the mountain. However, after the 1950 a constant decline took firm place.

In the 1930s of the XXth century, the first harsh and mass decrease of the cattle in the region took place (12). It was a consequence of the newly introduced regions and prohibitions on state levels, in connection to guarding the forests and improving their status. During this period, the grazing of goats has been banned or strictly limited. In many regions there were prohibitions for depasturage of all types of cattle in young forests. The first large-scale afforestation activities in Bulgaria have been made, which also led to decrease in the places for pasture. Another important region for the cattle decrease in this region was the increased migration processes: many people left the poor mountain regions and moved to wealthier and easier-to-live plain regions of the country (12).

A big number of sheep were bred in this period by the karakachans in northwestern Bulgaria, separately from the local Bulgarian population in this region. According to data collected in 2005 by elderly karakachan shepherds, before 1950 in the region of Vrachanska

Photo 21. The area around the village of Dolno Ozirovo

Planina the number of sheep and their herds was between 8 and 10 thousand each summer season. In addition, 60,000 other sheep grazed during the summer season across the pasture lands around the main ridge of Western Stara Planina – between Todorini Kukli (1785 m) and Midzhur (2168 m) peaks.

This data is confirmed also by Vatzev (1995). Analyzing the information by Draganova (1993) about the sheep breeding in the region of Northwestern Bulgaria (and VPM in particular) from the middle of XIX century up to 1877, it can be concluded that the number of sheep bred in this period was similar (and in some settlements even higher) compared to the number of sheep bred in the region from the beginning until the middle of XXth century.

Photos 22 and 23 illustrate how the terrains in the region of VPM looked like in the beginning of XXth century. They were obviously strongly deforested due to the much higher number of grazing domestic animals in comparison to the present moment (end of XXth century and the beginning of XXIth).

Another big collapse in the stock-breeding started in the end of the 50s of the past century. The private land was nationalized and the so called TKZS (co-operative agricultural farms) were created. As a consequence of this, the cattle was seized from the private farmers, which by that time bred their animals in many cattle-pens, which were scattered all around the mountain and were used all year round. Because of this collectivization, another decrease of the total number of bred animals was observed. They were concentrated in farms (often situated in the very residential areas). The number of freely grazing animals abruptly decreased. On the contrary, those bred in confined places (buildings) and fed on nutrition mixtures increased.

The third big fall in the stock-breeding in Bulgaria (and in particular the region of Vrachanska Mountain) starts after the socio-economic changes in the country after 1990. This process is still going on. It started with the destruction of the TKZS structures – with the idea to reintroduce the private ownership of animals and land, but no any working structure through which this reform would successfully take place was offered. Because of this, in the beginning of the process many animals were butchered or exported (as meat or alive). The buildings and facilities were destroyed or plundered. After this period of time, the remaining animals were brought by the people in buildings adjacent to their homes, and the numbers of animals of each farmer became very small, most often 5 to 10 animals. The number of the newly founded specialized farms for breeding a higher number of different species of domestic animals is also limited, compared to the years before 1990. In the last years, the lack of a clear and stimulating state policy in the fields of stock-breeding, the uncontrolled import of animal products from abroad, the increased immigration process and the negative population growth, the lack or limited possibilities for employment in the province, and last but not least the arriving retirement age or death of the elderly people who were usually taking care for the animals – all these factors caused negative consequences.

Presenting the above, we have to point out that according to experts an upsurge in the livestock breeding in Bulgaria (and in VPM in particular) is expected after the accession of the country to the EU in 2007. As a whole, right now VPM, Western Stara Planina and the surrounding regions offer very favourable conditions for pasture stock-breeding, especially for the production of the so-called “organic agriculture produce”. In conversations with young people from the region, we understood that they would tend animals in the future, if this is economically profitable for them, unlike how it is now.

Photo 22. Lakatnik area in the begging of 20th century (Radev, 1915)

Photo 23. Lakatnik area in the end of 21th century

Information about the numbers of the livestock is presented on Table 4 (Montana District), Table 5 (Vratza District) and Table 6 (Municipalities of Godech and Svoge).

Photo 24. Pasture cows near Gorno Ozirovo village

Photo 25. Sheep in the Dolno Ozirovo village

The data is taken from the Statistic Year-Books of the Vratza (33, 34, 35, 36, 37), Montana (29, 30, 31, 32) and Sofia districts (municipalities of Svoge and Godech) (20, 22), Archives of the Regional Agriculture and Forestry Services in Montana and Vratza and the Ministry of Agriculture and Forests (4, 5, 6).

The number of livestock in 2005 for all municipalities is presented on Table 7. Figure 5 shows the percentage of different domestic animals bred in all municipalities throughout the region.

Photo 26. Goats in the Dolno Ozirovo village

Photo 27. Buffaloes in the Varshech area

Map. 2. Territorial and administrative structure - Montana and Vratsa Districts, and the Municipalities of Svoge and Godech.

Map. 3. Territorial and administrative structure - the municipalities in the region.

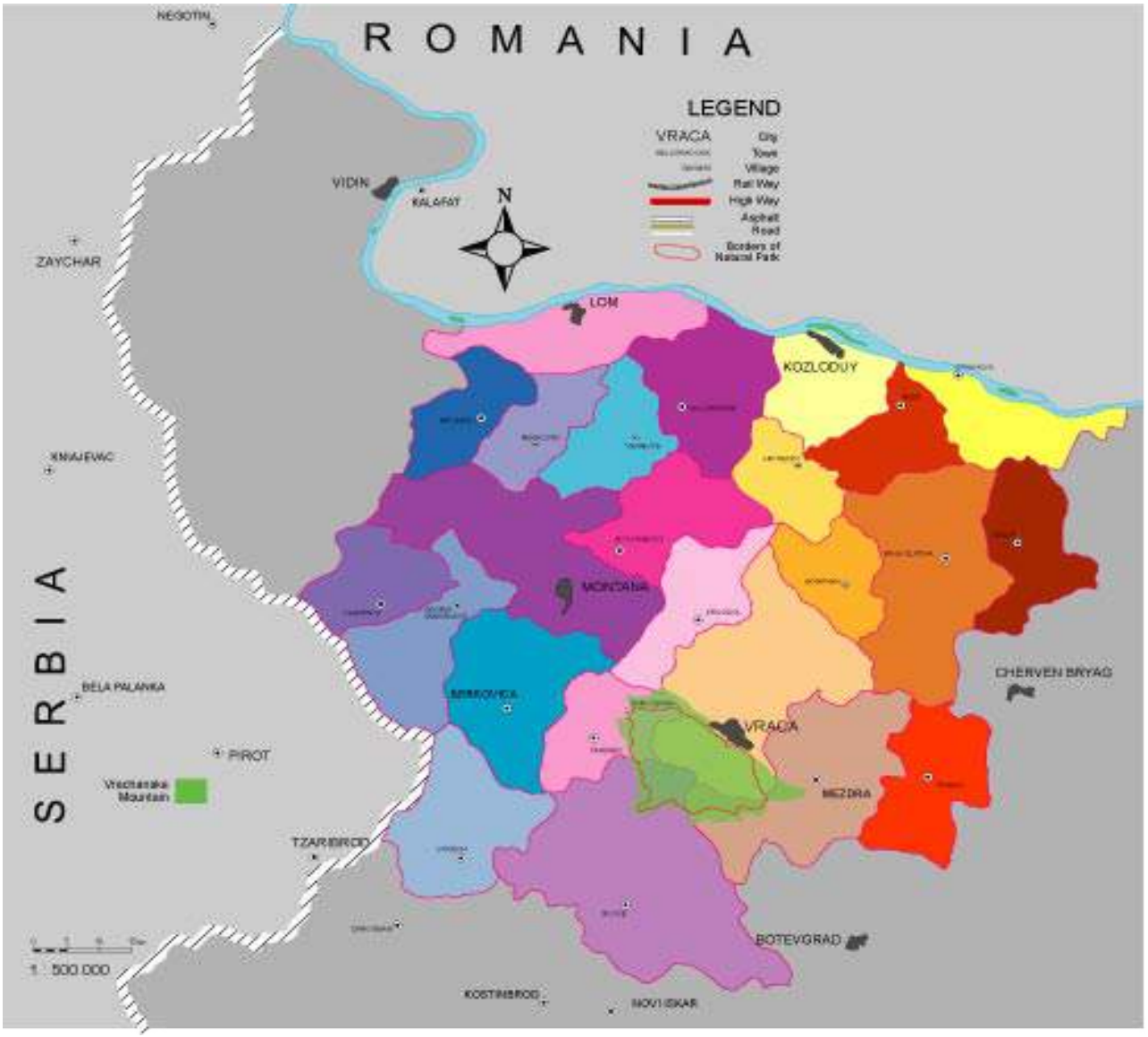


Table 4. The number of livestock in the Montana District

Montana District							
	1961	1965	1976	1985	1990	1995	2001
Sheep	295773	327890	325197	318554	226000	118000	67213
Pigs	110863	112205	218513	165463	153000	93000	17258
Cattle	67854	60202	70064	61336	48000	12000	10069
Goats	18356	12250	29411	30000	35000	38584	33277
Buffalo	5387	2857	2557	1313	no data	no data	412
Horses	7837	7196	4498	4073	no data	no data	5457
Donkeys and mules	no data	4920	8795	13036	no data	no data	8384

Table 5.The number of livestock in the Vratsa District

Vratsa District							
	1956	1965	1976	1985	1990	1995	2001
Sheep	1061973	159889	168746	319062	281022	136945	100032
Pigs	268433	123103	148829	210072	229872	48461	49275
Cattle	295707	52117	66823	64515	64874	16955	22449
Goats	62144	no data	no data	32146	31105	39797	40888
Buffalo	23308	no data	400	2203	2272	1538	832
Horses	53978	10670	4477	6373	no data	no data	7968
Donkeys and mules	10072	no data	no data	17829	no data	no data	9072

Table 6. The number of livestock in the Municipality of Godech and the Municipality of Svoge

Municipality of Godech				Municipality of Svoge			
	1995	2001	2003		1995	2001	2003
Sheep	11381	5052	4037	Sheep	16738	7431	6784
Pigs	1679	556	894	Pigs	3011	930	1776
Cattle	813	492	873	Cattle	2447	2037	2167
Goats	2173	1394	1327	Goats	5469	5236	4995
Buffalo	no data	3	no data	Buffalo	no data	14	no data
Horses	122	115	102	Horses	232	229	215
Donkeys and mules	302	187	157	Donkeys and mules	343	316	201

Fig. 1. Trends in the number of livestock in the Montana District (1961 - 2001)

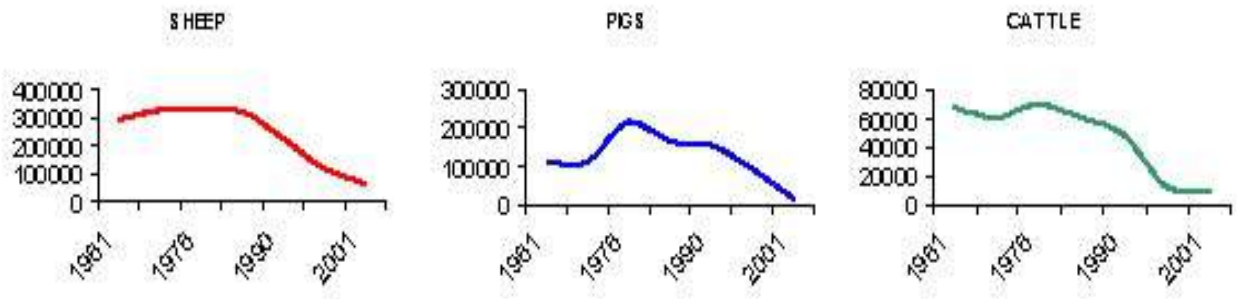


Fig 2. Trends in the number of livestock in the Vratsa District (1956 - 2001)

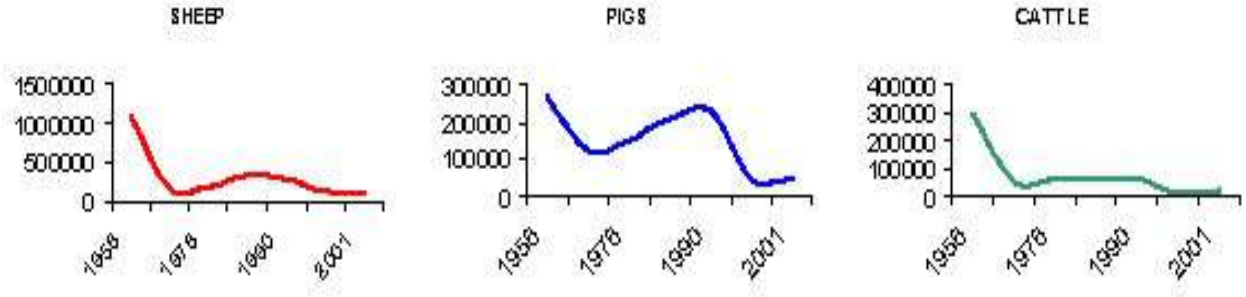


Fig 3. Trends in the number of livestock in the Municipality of Godech (1995 - 2003)

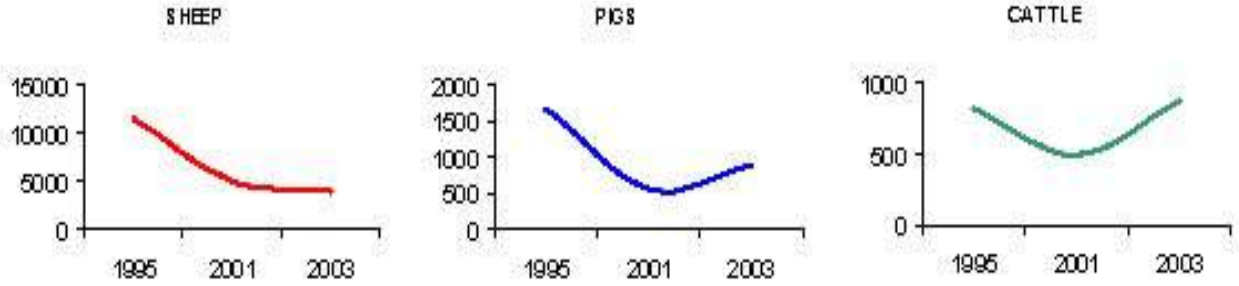


Fig. 4. Trends in the number of livestock in the Municipality of Svoge (1995 - 2003)

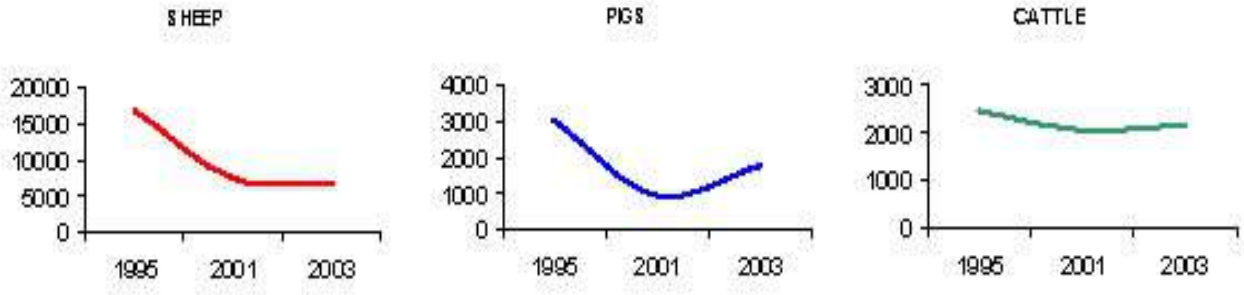
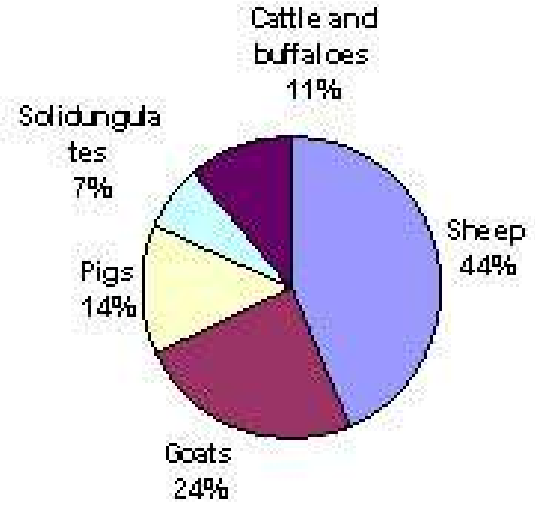


Table 7. The number of livestock in 2005 (by municipalities)
Note: The red colored municipalities are parts of VPM.

District	Municipalities	Area in sq km	Total number of lifestock	Sheep	Goats	Pigs	Solidungulates *	Cattle and buffaloes
Vratsa	Borovan	212	**10499**	3950	2500	1700	734	1615
	Byala Slatina	572	**24565**	9500	5600	2680	2205	4580
	Hayredin	190	**10550**	5369	1823	1274	684	1400
	Kozloduy	286	**10162**	5834	1283	1241	501	1303
	Krivodol	327	**19337**	8750	4830	2200	1520	2037
	Mezdra	554	**25396**	8350	6640	8120	1041	1246
	Mizia	207	**9343**	3804	2054	1849	563	1173
	Oryahovo	329	**13143**	5841	2053	3232	1049	968
	Roman	304	**10885**	4625	3225	737	934	1364
	Vratsa	679	**35468**	14000	10000	6000	2188	3280
Montana	Berkovica	465	**12651**	5965	3786	856	1301	743
	Boychinovci	308	**10917**	4071	3189	951	917	1789
	Brusarci	194	**8788**	3484	2312	1171	821	1000
	Chiprovci	287	**8276**	3985	3385	236	449	221
	Georgi Damyanovo	321	**6928**	3160	2872	284	495	117
	Lom	324	**14662**	7500	2100	1500	1414	2148
	Medkovets	362	**8455**	4150	1450	1320	668	867
	Montana	648	**26106**	8826	6972	4889	2180	3239
	Valchedram	432	**14362**	7787	2327	1670	870	1708
	Varshec	240	**8345**	3784	2847	607	623	484
	Yakimovo	221	**8950**	4103	2037	1090	622	1098
Sofia	Godech	374	**8765**	5119	1672	857	259	858
	Svoge	866	**14726**	8602	2130	1131	416	2447
Total		**8701**	**321279**	**140559**	**77087**	**45595**	**22454**	**35685**

* Solidungulates include horses, donkeys, mules

Fig. 5. The percentage of different domestic animals bred in all municipalities in the region during 2005.



In the present moment, the issue concerning the activities that should be done when a domestic animal dies (i.e. what happens to the carcass), is still unclear. In principle, there is an official order in force released by the national veterinary authorities to the mayors of the settlements. According to this order, if a domestic animal dies, it must be delivered to the local veterinary. Afterwards the carcass should be buried somewhere near the village. In the commonest case, the dung-hills are used. But in practice this regulation is not observed, and it is very difficult to be controlled. Very often the mayors and the veterinary services do not understand at all, that there is any dead animal, because the farmers do not inform them about such events. Most often the carcasses are simply thrown away in the open, close to the villages – in gulches, near roads, dung-hills, etc.

In some cases, there are separate pits still remaining for the carcasses of domestic animals. They are built before the political changes in 1990. In such cases, part of the bodies are thrown there, but others are again thrown in the open. Many of these old pits have been destroyed, or have become part of private lands, or cannot be used for some other reasons. In 2005, a specialized truck started to arrive once a week, or whenever upon request (for the regions of Montana and Vratza). The truck is sent from an incinerator factory situated in Northeastern Bulgaria. In general, this system is not very effective either, and does not provide a complete solution to the dead domestic animals problem. All in all, we can conclude that for the present moment the dominating part of the carcasses are thrown away in the open, near the human settlements, and without any control. Part of the dead bodies are sometimes used for feeding dogs or for the preparation of hunting baits for ‘harmful’ (as locals think) carnivores .

5.9.2. Feeding sites

There is only one feeding site available in the region, and it is the only one for the entire Northwestern Bulgaria – the BPPS' feeding site (Map 4). It operates since August 2004.

Photo 28. The location of the BPPS feeding site

Photo 29. The location of the BPPS feeding site - a closer view

Near the platform, there is a rock massif being the most important potential nesting site for Griffon vulture in the region. This is the place for which we have a lot of historical data proving that Griffon vultures nested there in the past – the “Orlovi Dupki” (“Eagles’ holes”) locality, below the Golema Lokva peak (1126.8 m).

Map. 4. The location of BPPS feeding site in Vrachanska Planina Mountain

Photo 30. Supplying food at the feeding site

Photo 31. Cleaning the snow cover over the food during the winter months

Photo 32. Ravens on the feeding site

Photo 33. On 18 April 2005 one Egyptian vulture visited the feeding site for the fist time

The regular supply of food on the feeding site near Dolno Ozirovo village was the main task for the local BPPS team. 11 905 kg. of food has been delivered during the last 3 years (photo 30) as follows:

- before the construction of the feeding site: 1 300 kg (2003-2004),
- after the construction of the feeding site: 10 605 kg (2004-2005).

The number of animal corpses provided as food on the feeding place during 2005 is presented in Figure 6 and Figure 7.

This way the vultures in the region are permanently provided with easily accessible food on-site, where human-caused disturbance is minimal.

During the winter months the snow cover over the food is regularly removed (photo 31). Up to now, the vulture “restaurant” has been visited by Raven (photo 32), Golden eagle and Egyptian vulture (photo 33) specimens. Some additional feedings were provided in other areas where monitoring of Egyptian vultures had been done.

Fig. 6. Food provided at the feeding sites during 2005 (by months).

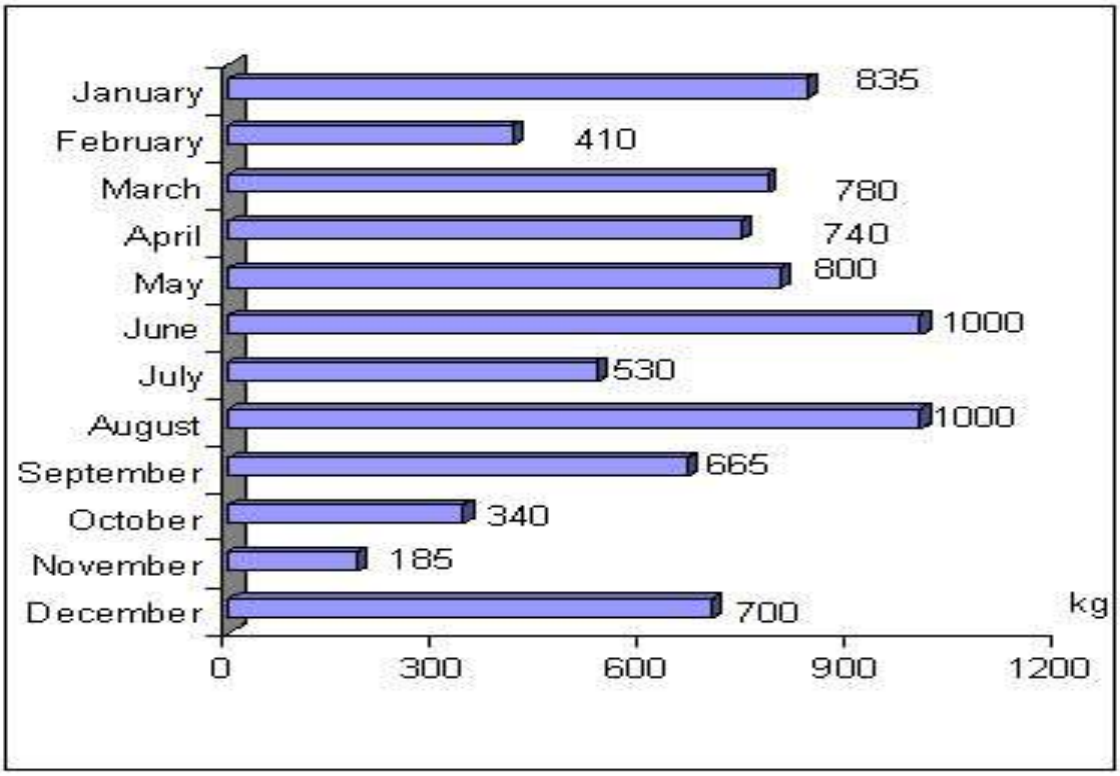
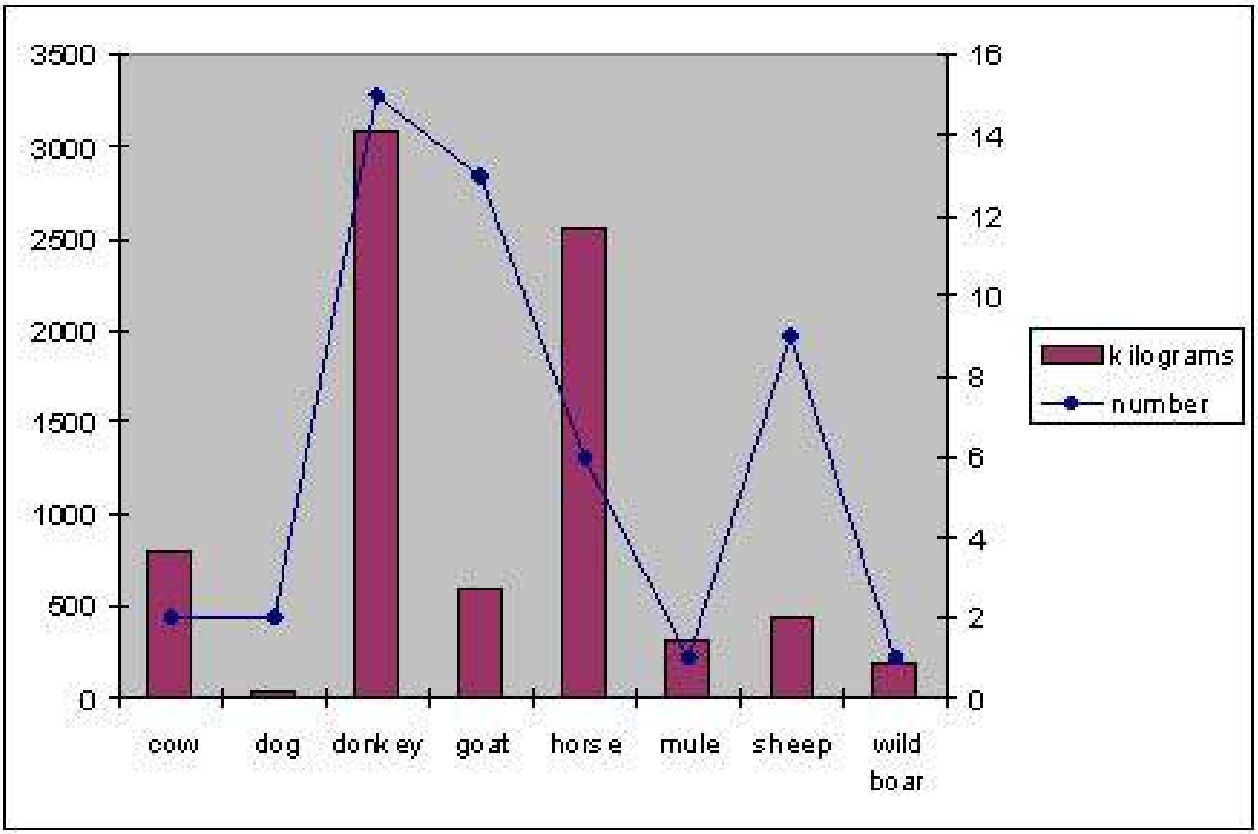


Fig. 7. Number of animal corpses provided as food on the feeding site during 2005.



5.9.3. Wildlife species

The only relatively abundant species in th area is the Wild boar. The Roe deer is rare, and the Red deer is represented by single wandering specimens. Their mortality rates and numbers cannot provide enough natural food basis for the vultures.

According to the data BPPS has collected up to the present moment about the raids of wolves and jackals on domestic animals, it can be concluded that this is not a constant and sufficient food source for the vultures. Very often the attacked (wounded) animals are taken away by people, especially when the herd is accompanied by shepherd, and the remaining good meat is used for food by the local people. In some cases, when the livestock graze without a shepherd in the mountain, very small parts of the animal corpses to be eaten by vultures remain after wolves' raids. This holds true especially during raids on smaller animals such as goats and sheep, particularly when their number is smaller. Bigger quantities of food for the vultures remain when wolves attack larger animals (cattle, horses,

Map 5. The The territories of the Regional Forestry Board Berkovica and State Forestry Divisions Godech and Svoge.

donkeys), especially when their carcasses remain in open (not forested) areas.

The numbers of some wildlife species in Vrachanska Planina Mountain during the year 2005 are given on Table 8. The data is taken from the Archives of RFB Berkovitza (1), the Archives of SFD Svoge (3), and the Archives of SFD Godech (2).

Table 8. The number of some wildlife species in Vrachanska Planina Mountain during 2005

Animals	**State Forestry Division Svoge**	**State Forestry Division Godech**	**Regional Forestry Board Berkovitsa (without Vidin area)**
	866 sq km	**374 sq km**	**9 627 sq km**
Red deer (*Cervus elaphus*)	88	30	75
Roe deer (*Capreolus capreolus*)	1632	212	3243
Fallow Deer (*Cervus dama*)	11		91
Wild boar (*Sus scrofa*)	956	193	2311
European hare (*Lepus europaeus*)	1558	293	33155
Wolf (*Canis lupus*)	98	13	128
Golden jackal (*Canis aureus*)	83	23	1498
Common red fox (*Vulpes vulpes*)	691		1833
Vagrant domestic dogs (*Canis lupus f. familiaris*)			702

5.9.4. Hunting activities

The hunting on the territory of the park (except the reserve) is not forbidden. The main game species are the Wild boar, the Red fox, the Roe deer and the the European hare. The bird hunting is not very popular here and is therefore very rarely practiced, mainly on Quail, Wood pigeon, Grey partridge and Rock partridge.

The poaching is not rare here, and is practiced in almost all of its variations: hunting on protected species out of the hunting season, by people without hunting license, night hunting etc.

There are several known cases of using step-hold traps and metal string traps. The real rate of this activity is difficult to be assessed, but it undoubtedly exists.

As a whole, it can be concluded that hunting cannot supply enough food for the vultures. There is data that Golden eagle specimens (*Aquila chrysaetos*) have been observed to feed on parts of a Wild boar carcass, which were left in the open after the animal was killed by hunters. However, these are separate and very isolated cases. Animals wounded by hunters more often die later in places inaccessible for vultures and other scavenging birds.

5.9.5. Other scavenging species in the area

- Egyptian Vulture (*Neophron percnopterus*): during the breeding season of 2004 one new pair was registered to inhabit the main cliff massif. In the previous years this territory was occupied by a single bird. In case this pair has bred, it was probably unsuccessful as no juvenile bird was observed. According to our own data and after discussion with Mr. Marin Kurtev of BSPB, it is the only proved pair for the whole Northwestern Bulgaria, and one of the two in the whole Western Bulgaria. In 2003 another pair, which previously bred in the northeastern edge of the mountain disappeared, and in 2004 second pair which bred till 2003 in the eastern edge of the mountain also disappeared. These data show a clear decline of the species in the region.

- Golden Eagle (*Aquila chrysaetos*): there are 4 or 5 pairs inhabiting the mountain, and another 1 or 2 in some adjacent territories.

- Raven (*Corvus corax*): it is a common species in the region, breeds mainly on rocks but also on trees and electric pylons. During the winter of 2002/2003 about 200 ravens were observed feeding at a dumpsite near the town of Vratza.

5.10. Socio-economic situation and trends in the region

In the last 15 years of economic and social transition, some negative socio-economic processes started here and in the whole country. The major ones are as follows:

- many industrial facilities closed doors or at least drastically reduced their production.
- the agriculture production faced severe decline.
- lack of job alternatives and no development of new industries took place.

As a result, the following trends are observed at present:

- remarkable decline of the local population and strong migration of the youngest generation to the bigger cities and abroad.
- the average age of the population quickly increased.
- the number of people living in the villages is decreasing.
- decrease of the living standard took place – this is the poorest region of the country.

- destruction of the infrastructure – mainly of the road network.

These processes are fully in force in the region in the present moment.

Around the mountain there are four municipalities – Vratza, Varshetz, Mezdra and Svoge, with a total human population of 84 909.

The main industries in the area are food processing, clothes and fabrics production, cement production, brewery, ceramic production, etc. The agriculture is represented mainly by wheat and meat production.

Tourism is also developed and is based of the thermal springs in the town of Varshetz. It is a spa resort of national and international significance.

The unemployment rate is about 35%.

5.11. Threats

5.11.1. Humanization of the territory

The region of Vrachanska Planina Mountain is relatively sparsely populated

The area of the VBNP is divided between 3 districts and 4 municipalities, within which 20 lands (areas belonging to villages) are included as follows:

Sofia District:

Municipality of Svoge: Lands of the villages Opletnya, Druzhevo and Milanovo.

Montana District:

Municipality of Varshetz: Lands of the villages Gorna Bela Rechka, Dolna Bela Rechka, Gorno Ozirovo, Dolno Ozirovo and Stoyanovo.

Municipality of Krivodol: Lands of the villages Glavatzi and Kravoder.

Vratza District:

Lands of the villages Beli Izvor, Lyutadzhik, Zgorigrad, Pavolche and Chelopek (plus the Vratza City Land).

Municipality of Mezdra: Lands of the villages Lyutibrod, Zverino, Elysseina, Ochin dol.

In terms of forestry and agricultural areas, the territory of the park falls within the RFB Sofia and RFB Berkovitza; SFDs of Svoge, Berkovitza, Vratza, Mezdra, and territories of the former APCs Krivodol, Vratza-East, Vratza-West, Mezdra, Iskar and Varshetz.

Below are provided some of the main infrastructural parameters of the region:

Road network – total length 165,7 km (102,6 km are on the periphery of the mountain and actually mark its perimeter).

A. Circular roads:

First class: 18 km = 18%
Second class: 28.2 km = 27%
Third Class: 43.5 = 42%
Fourth Class: 12.9 km = 13%
Total =102.6 km

B. Crossing roads (in direction to/from the inland of the area):

Fourth Class: 63.1 km = 100%

Sports: in the area around “Parshevitza” hut there are 2 ski runs, 300m each. In the region of “Zambina mogila” peak there are 2 more, 200m each. The total capacity of both is a total of 1000 skiers.

The alpinism is well developed in the mountain. However, the rock climbing at the main cliff massif does not exist due to the inaccessibility of the area.

There are more than 500 caves in the mountain, including some of the most beautiful ones in the country.

According to data from the Park Information Centers, the number of visitors are as follows:

- The Information Centre “Prilepa”, near the Ledenika cave: the number of visitors and tickets for the cave visits per calendar year (2004) is 20,000 (twenty thousand).

- The Information Centre “Ritlite”, at the Ritlite Natural Landmark near the village of Lyutibrod: 6000 (six thousand) people. Organized visits of foreigners: 2500 people. For the non-organized visits of foreigners, no counting has been carried out.

No counting by the administration of VBNP for the number of alpinists, speleologists and delta-planerists visiting the region has been carried out.

Existing Accommodation Facilities:

1. Alpine Chalet – 424 m of altitude, northwards of the Vratzata Gorge, 55 beds.
2. “Okolchitza” Chalet – 1060 m; near Mt. Okolchitza, 85 beds.
3. “Ledenika” Chalet – 850 m, near the Ledenika Cave, 70 beds.
4. “Parshevitza” Chalet – 1280 m, on northeast, below Mt. Beglichka Mogila, 70 beds.
5. A total of 10 holiday houses belonging to various companies and departments in the region westwards of Vratza, with a combined capacity of 692 beds.
6. Three small private hotels and bungalows, with a combined capacity of 50 beds.
7. The Cherepishki Monastery: 30 beds.

The total accommodation capacity during the winter is 300 beds.

On the territory of the municipalities of Svoge, Mezdra, Varshetz and Krivodol there are no accommodation facilities.

At the Okolchitza peak there is a platform for para-planerism. It was regularly used in the past, but at present this activity is greatly reduced. There are single planerists flying during the summer months.

5.11.2. Habitat destruction

Searching for treasures: this activity is widespread in the region thanks to its rich history. There are some well-known localities, mainly rock formations such as cave entrances, vertical cliffs etc, which are often visited by treasure hunters. With their presence they can disturb the birds nesting on the cliffs. BPPS was reported for a case in the spring of 2004 when such people broke the egg of Golden eagle pair breeding in the western part of the mountain. For their purposes these people often use ropes and stairs to reach inaccessible places. Sometimes even dynamite is used, which severely destroys the landscape forever.

Mining: 5 to 19 years ago there were still some mines into operation. Presently in some of them there are only restricted restoration activities. The “Medna” and “Plakalnitza” mines no longer operate.

Lime careers: 15 years ago the region of Dolno Ozirovo was famous for its traditions in lime production. At present, the biggest part of the lime production careers do not work at all, many of them are destroyed and are not suitable for exploitation. Incidentally, lime is produced in the region in very limited quantities at lime production units that are old and rather primitive. Lime production is carried out in the region of the Cherepish railway station. Nowadays, the biggest career is situated in the northwestern edge of the mountain. It is owned by the international company Holcim. There are some more careers still operating but this is a sporadic case and they without economic value anymore.

Wind energy generators: so far, there are no wind generators into operation, but in the future this possibility should not be excluded. At the present moment, there is big interest in the country to this energy source and research is going on the existing possibilities (i.e. appropriate places for building such installations). If such wind stations are built somewhere around the periphery of Vrachanska Mountain, this will be a potential negative factor for the

vultures and other birds in the region.

Factories and Commodity Production having impact on the territory of the VBNP:

- Holsim Bulgaria Ltd, village of Beli Izvor (production of Portland-type cement).
- Toplofikatzia Vratza Ltd (production, transportation and distribution of heat energy for commercial and public needs).
- Varhim Ltd, Mezdra (hydrated lime facility at the Cherepish railway station, Municipality of Mezdra).
- Chimko Ltd, Vratza (chemical industry – production of fertilizers and other chemical products). At the moment the production is stopped, but a process for restarting the production is going on.
- Elysseyna Ltd, railway station of Elysseyna (black copper metallurgy). The enterprise has ceased its production.
- Asphalt mixing installation in the village of Pavolche.
- Zorov dairy factory, near the Parshevitza chalet.

5.11.3. Lack of food supply

At present, the available natural food is not sufficient to support in a sustainable manner the vultures in the area. However, the regular presence of the species in the mountain shows that, at least to some extent, there is a natural food available. The real problem probably is that the food is not constantly available and the vultures are visiting the region mainly in the summer months. The reason for this fact is the lower number of dead livestock animals acceptable for the vultures.

The wild species cannot provide enough food, too. The only real source of food can eventually be the Wild boar, but this species is often hunted and dying in places where the vultures cannot reach it.

In certain places, there still exist some huge holes dug in the ground, usually close to villages, where the dead animals are disposed of. This practice is illegal but still widely spread. Some of the carcasses are visited by the vultures, especially Egyptian vultures. BPPS is currently working in order to set a mechanism of obtaining these animals for our feeding platform. Otherwise the carcasses will be cast in the above described places.

As a conclusion, it could be stated that when BPPS feeding site will start, and when vultures become used to it, their food will not be a problem anymore.

5.11.4. Electric power lines

This is not a real threat on the territory of the mountain. Of course, all villages have electric supply, but they are situated mainly on the periphery of the mountain. The main high-voltage TLs are outside the mountain (7), on much lower altitudes (Map 6).

Aerial Electric Supply in VBNP:

Svoge Municipality: The main 20 kV electic TL network in the region is in the air. It is built for electric supply of the villages in the region. This network is primarily of mast type. The biggest part of the network is dismantled by thieves. In the contact zone, near the village of Druzhevo, a 400 kV electric transmission line passes by.

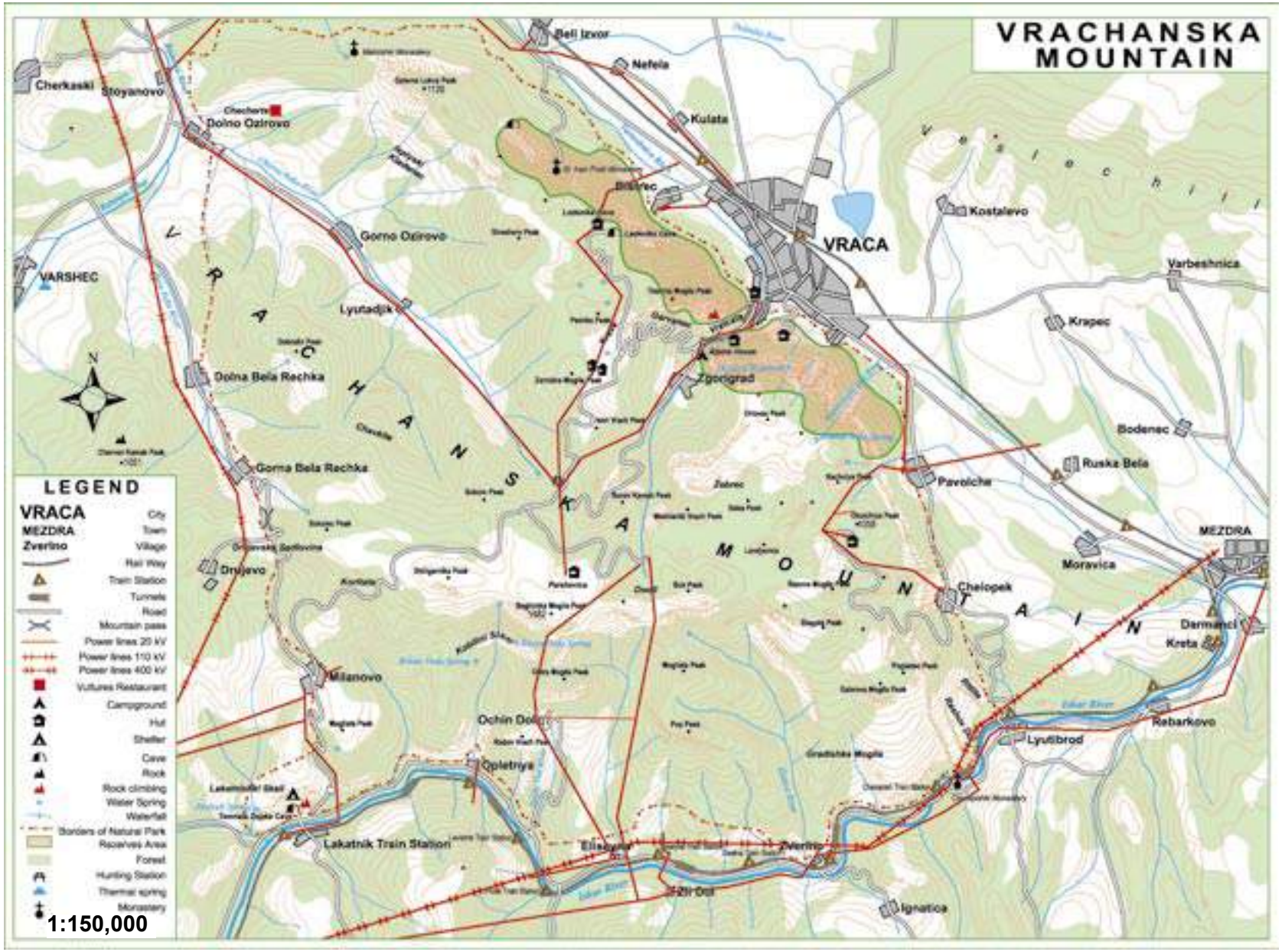
Mezdra Municipality: The main electric TL network is 20 kV, aerial, for supplying the villages of Ochin Dol and its adjacent neighbourhood, as well as the Mechata Bara TP. Electric poles in the region are of mast type, aerial. There is a ride for a 20 kV transmission line (TL) to the Plakalnitza Mine. In the south part of the region, a 110 kV TL goes from the town of Mezdra in southwest direction to the region of Sofia.

Varshetz Municipality: on the territory of VBNP there are no electric transmission lines or other electric installations/equipment built. In the contact zone (the region of the

Photo 34. A transmission line 400 kV near Drujevo village

Photo 35. A transmission line 20kvV a near sheep pen

Map 6. The main high voltage power lines (7).



villages Gorna Bela Rechka and Dolna Bela Rechka), a transit TL 400 kV passes by. In addition, through the contact zone, a mast type TL 20 kV passes by for supplying lower-voltage TLs in the villages Dolna Bela Rechka, Gorna Bela Rechka, Dolno Ozirovo, Gorno Ozirovo, Stoyanovo, etc.

Vratza Municipality: the main electric TLs are 20 kV, aerial, for supplying the existing consumers in the region. On the territory of the park there are 26 elecric poles. Most of them are connected aerially.

Krivodol Municipality: there are no aerial electric TL networks on the territory of VBNP.

In VBNP (as well as in the adjacent territories) the most common voltage type of electric TL network is 20 kV. It is situated around villages, rest houses, factories and old mines. Because of this fact, big territories of the mountain are without any aerial electric TLs. In general, the most dangerous TLs for the Griffon vultures and the other large bird species are the two high-voltage TLs (400 kV and 110 kV).

The distance between the feeding platform and the breeding area rocks in the "Orlovi Dupki" locality above the village of Dolno Ozirovo (straight aerial distance) is about 3 km. The closest distance from a powerful 400 kV TL (northwest from the Dolno Ozirovo village, outside the territory of VBNP) to the "Orlovi Dupki" locality is about 7.5 km. The direct aerial distance from the platform to the same TL is about 4.5 km.

5.11.5. Poisoning

Illegal use of poisoned baits - In the VPM, as well as in the whole Northwestern Bulgaria, there is no data proving that poisoned baits are in use. According to the hunters and the relevant authorities in the region, this practice was not registered here. The latest proved cases date back to about 30 years ago, when the strychnine was often used against the wolves.

During the last 10-15 years there are some cases of rodenticides usage in the agricultural fields around the VPM. Several cases of poisoned birds of prey and owls are reported, but no vultures.

In 2005 there were some official inquiries through letters (15 inquiries sent out, 10 of them received back) to the administrations that have information related to poisoning RVS, REWI, RFB, SFD and the Museum of Natural History in Belogradchik. In neither one of the official replies there is any information showing that in the last two decades any legal or illegal poisoning of predators in the region of Northwest Bulgaria has been practiced. This is also shown by the research of BPPS in these territories of Bulgaria during the last years. Another potential danger which can be expected is related to the increased use of rodenticides, which at present are almost not used only because the local farmers do not have enough money for buying chemicals.

Lead poisoning - This problem is not well studied in Bulgaria. During the last year BPPS prepared special project for studying the real situation around 4 big wetlands where a strong hunting pressure is reported and starting information campaign for the authorities, the hunters and the public. Unfortunately, up to now we could not succeed to allocate the funds needed to perform this project.

There is no data for such cases in the concerned area. However, this threat must be taken very seriously. There are many known cases of crippled Wild boars which cannot be found by the hunters and probably died afterwards in the open. This is a real possibility for a transfer of lead poisoning. Moreover, there are hundreds of stray dogs killed by hunters annually in the region surrounding the mountain. There is also a registered case of Griffon Vulture feeding on dog carcass in November 2003. These dogs are a real threat, and special attention must be paid to the problem.

5.11.6. Shooting

Despite the fact that all birds of prey are strictly protected by the law, cases of shooting are not isolated in Bulgaria. The region of the VPM is not an exception. BPPS is aware about a local hunter who killed a Golden eagle in the autumn of 2001. However, most frequently reported cases are about Common buzzards, Goshawks and Sparrowhawks during the winter months. There are very few taxidermists in the region, and they are mainly in the bigger towns.

In 2005 we received information from a local person that a bird is killed with a shotgun by poachers in October 2004, in the lowland region between the town of Berkovitza and the town of Montana. BPPS launched a survey in this region. However, we do not consider this information fully reliable. The data collected so far by BPPS in Northwestern Bulgaria and other regions of the country in the last few years shows that the hunting by huntsmen/ poachers is the biggest negative factor directly influencing the birds of prey. Because of that the activities for decreasing the negative impact of hunting on the birds of prey (and vultures in particular) will be the prime priority in the work of BPPS in VPM, Western Stara Planina Mountain and the adjacent regions. In this respect, a brochure in 2000 copies will be circulated in 2006. It will deal with the problem of shooting the birds of prey. In 2006, BPPS will continue its work on the project in the region of Northwestern Bulgaria. It will focus on killing the birds of prey and other protected species of animals for stuffing purposes. We will pay particular attention to the work with punitive detachments. Our organization will also cover more regions of the VBNP hunting companies in the montane regions, as well as in the plain fields in western and northern direction. In 2006 BPPS will continue to use the different regional mass-media with the purpose to maximally decrease the hunting of birds of prey and various issues related to the other negative impacts on the vultures.

5.11.7. Risk of social rejection of the project

Up to now, there are no reasons and signals in direction that this reintroduction project will be rejected by the local people. Considering this, the main focus should be put on convincing the local people that the artificial feeding is not attracting the wolves at all. On the other hand, in the last 3 years BPPS gradually works towards attracting the the local people to the idea of this species' recovery. Step by step people become aware that the project mission and its objectives can bring them benefits only, i.e. increasing the natural value of the region, attracting tourists in the future etc., but no negatives.

6. The Reintroduction

Our choice of reintroduction method is based on a detailed survey on the most of the existing publication and reports resulted from 30 years vulture reintroduction efforts in France, Spain, Austria etc. which brought the Griffons, the Bearded and the Black vultures back to the wild. Being involved in the BVAP we are in continuous contact with these same people and organizations that actually first developed the vulture reintroduction methods and later on initiated BVAP itself. Throughout the last few years we got to enjoy their helpful advises and priceless experience. The summit of our cooperation took place in May 2006 in the village of Peyreleau located in the hart of Massive Central – the most French's successful reintroduction site. One week training seminar on the Griffon reintroduction was held there for teams of Balkan BVAP members. We were introduced in details to the reintroduction techniques by leading experts in the area from BVCF (Spain) and LPO (France). Mr. Michel Tarasse – one of the most experienced Griffon reintroduction experts was presented himself among the lectors. Theoretical parts and field practices were harmonically combined to show and transfer knowledge that has been systemized for tens of years. Two more Griffon and one Bearded reintroduction sites were visited during the trip.

Three BPPS members took part in this extremely important event. It gave us the opportunity to gain real feeling and experience on all the different reintroduction issues and helped us to pick the most appropriate reintroduction method to be applied with the Griffon vultures in the Vrachanska Mountain. It is the "Release cage" technique that was consider as most relevant. Details on how the "Release cage" method is going to be applied to the specific environment of Vrachanska Mountain are provided in the following chapters.

In 1995 the IUCN/SSN Guidelines for Re–introductions (16) prepared by reintroduction specialist group were published. This a cornerstone document that specifies the particular strategy and rules that must be followed in every reintroduction attempt in order to ensure that the reintroductions achieve their intended conservation benefit, and do not cause adverse side-effects of greater impact. This guideline will be strictly followed in the Griffon vulture reintroduction on the Balkans.

6.1. Location of the reintoduction cage and the demonstration cage. Cage plans

6.1.1.Re-introduction cage

The release site has been already identified by BPPS and approved by the Reintroduction Committee during their visit to the park in March 2006. The area is a former nesting site of the species. It is located on the territory of Nature Park "Vrachanski Balkan" in the area "Surayny Kukly" (at 350 m a.s.l.), which is situated 2 km. from Dolno Ozirovo village. Here the re-introduction cage (aviary) will be build. The chosen place is 1 km away from the existing feeding place and 2,5 km from the rock massifs very suitable as nesting habitats for the Griffon vulture (historical nesting area). The size of the cage is: 24 m long, 12 m wide, 4-6 m high (see fig. 8). It will be built from a massif construction – metal profiles and concrete, and it will be covered with a metal net. During the construction of the cage, there is going to be a rock wall in it – a natural from the terrain or artificially built with natural rock parts and segments, The inside of the cage will be additionally arranged with the necessary perches, water basin, etc.

The chosen region combines some positive and negative factors.

The positive factors are:

1. Near by there is a big rock massif with a lot of suitable nesting and resting

Photo 36. Panoramic view of of the reintroduction area

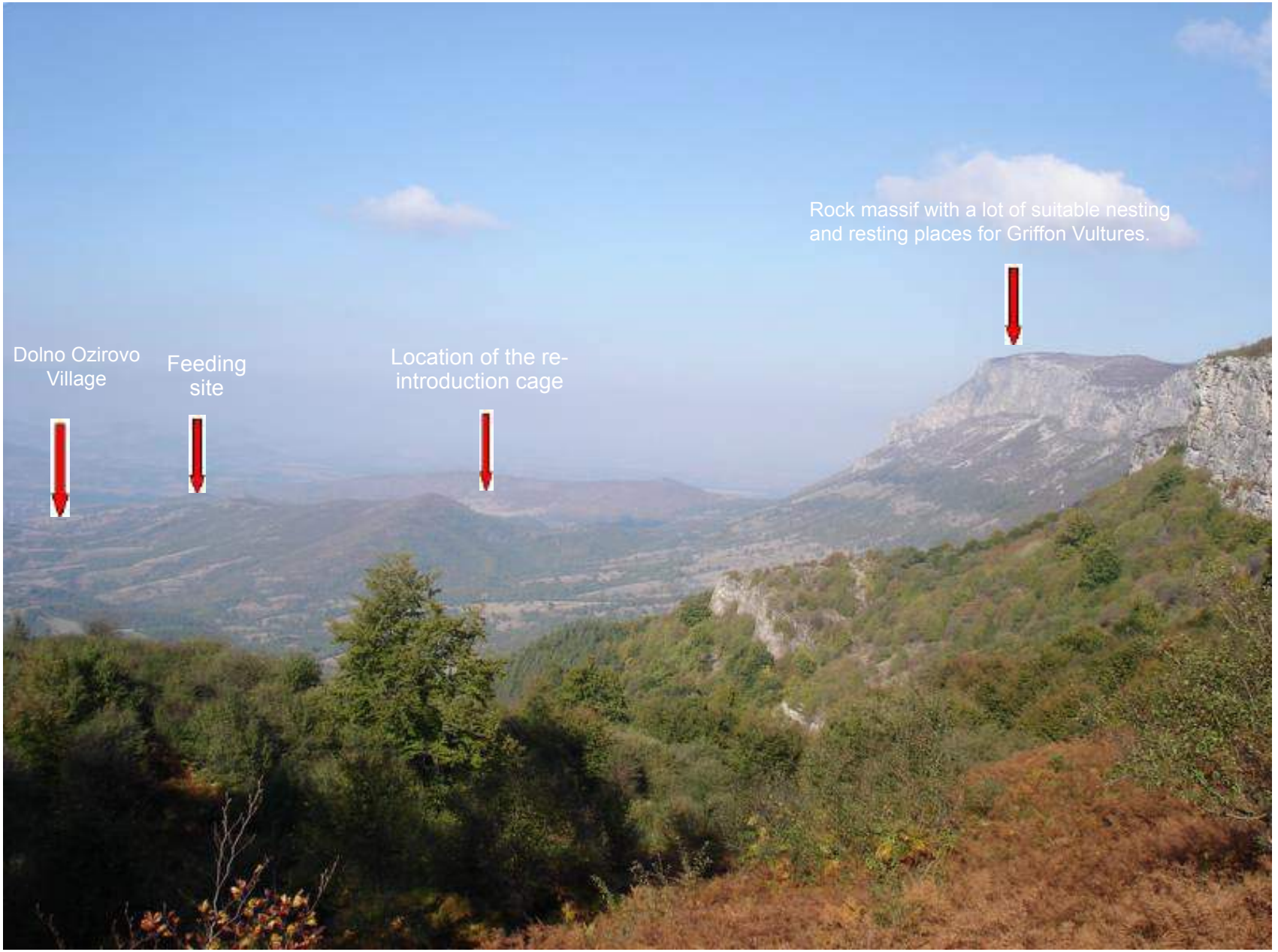


Photo 37. Panoramic view of the release site.

Photo 38. The area “Surayny Kukly” where the reintroduction cage will be build.

places.

2. A feeding platform exists since 2004
3. Low altitude.
4. Good exposition
5. The region is part of the protected area VBNP – the second biggest nature park in Bulgaria with a territory of 288,5 square km; the strict reserve “Vrachanski Karst” is part of it.
6. It is situated near to Dolno Ozirovo Village that gives good visibility and quick access
7. Human presence and negative activities are highly reduced in the mountain
8. The local people support the BPPS initiatives for future reintroduction
9. There is no high voltage power lines in the area

The negative factors are:

1. The existing dirt roads are not in good condition They are not accessible to the vehicles throughout the whole year
2. Sometimes treasure-hunters visit the area.
3. There is a potential danger for forest fire.
4. The close situation of the village could be a problem when the Griffons will be released. Some of them could get there.

6.1.2. Demonstration cage

The demonstration cage (see fig. 9) will be build near to the entrance of cave “Ledenica” (16 km. away from Vratsa city). This place is one of the most frequented in the park. Here are also situated the Information (Visitor) Centre “Prilepa” (20 000 tourists in 2004) and “Ledenika” Chalet.

Photo 38. The Ledenica Chalet near by where the demonstration cage will be build.

Figure 8. The plan of the reintroduction (release) cage

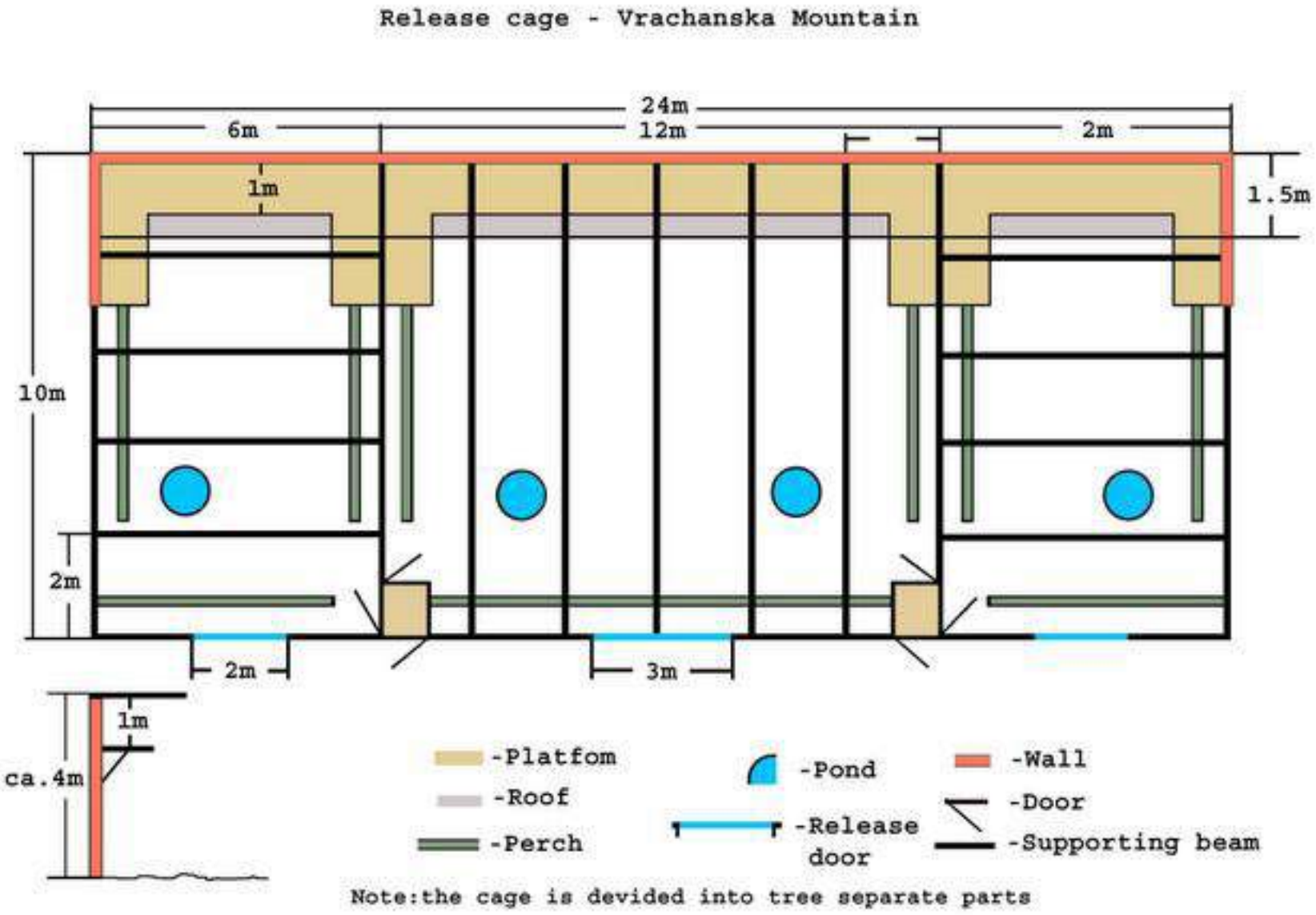
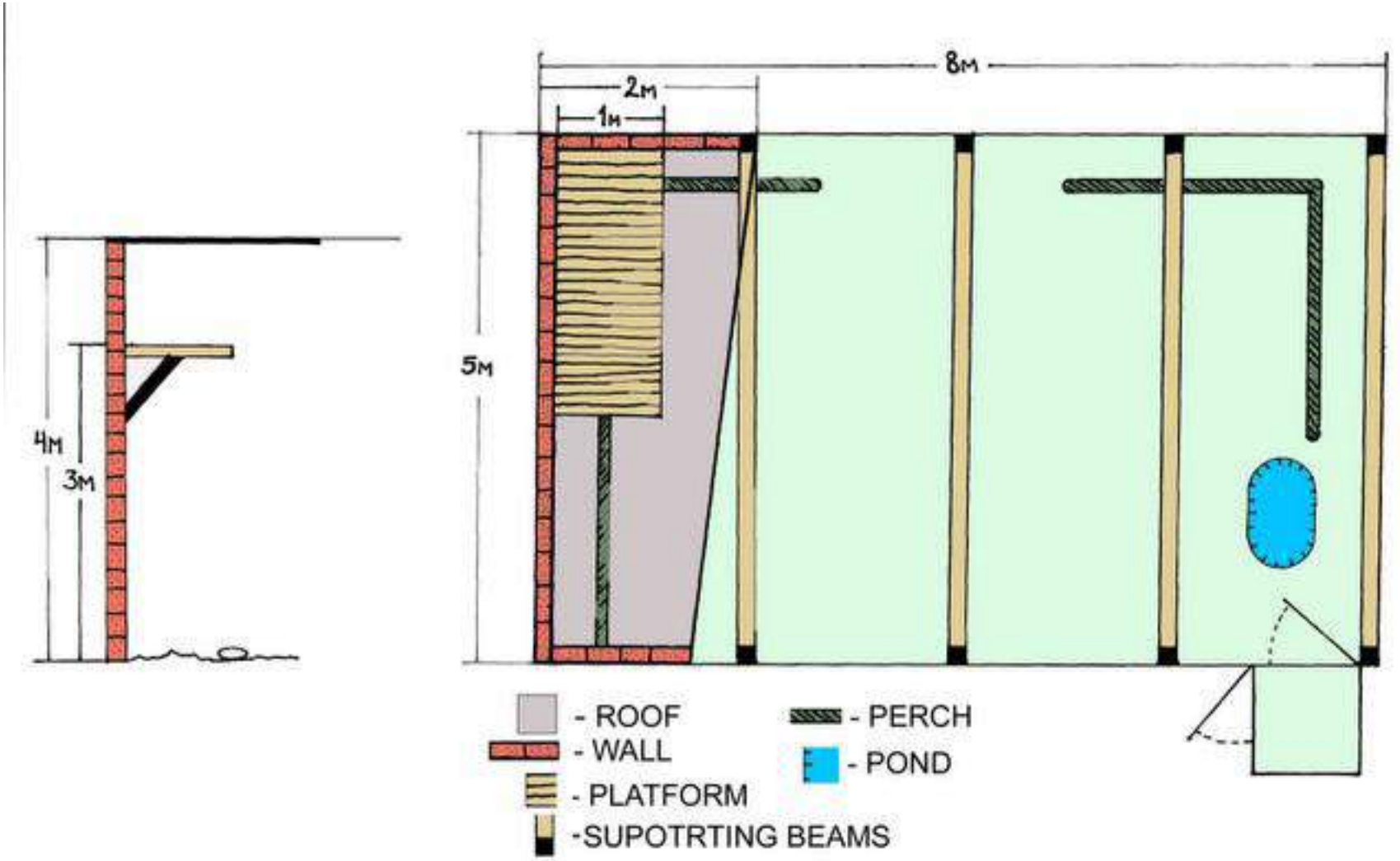


Figure 9. The plan of the demonstration cage.



6.2. Infrastructures

The existing infrastructure includes:

- A feeding site, build by BPPS and operating since August 2004.
- Two gravel roads (in bed condition, especially in winter) leading to the feeding site
- A gravel road passing near the location where the re-introduction cage will be build (constructed, set)
- BPPS' accommodation facility in Dolno Ozirovo village

Infrastructure to be developed:

- Repair of the existing main gravel road passing near the re-introduction cage.
- Construction of road diversion from existing gravel road to the re-introduction cage (300m long).
- Buying and transportation of a caravan, which will be situated near the re-introduction cage

6.3. Animal sources

The main source of birds for reintroduction programs remains Spain where the highest number of viable Griffon populations occurs. If second source is needed the French populations are healthy enough to provide it. Our partners from BVCF, Spain and LPO, France already declared their willingness to supply the needed number of individuals. These will be mostly juveniles born in the wild or vagrant birds that at some point needed treatment in rehabilitation canter and eventually were kept for reintroduction purposes. Big number of birds is collected this way each year at the recovery centres in Spain and France.

Thus a group of 10 to 12 birds will be transferred each year to the Vrachanska Mountain Reintroduction program.

The transportation will be assured with all the needed documents (CITES passports, medical examinations etc), and then the birds will be transported by vehicle or shipped to Bulgaria. Once arrived, they will spend around one and a half month of quarantine at the wildlife rehabilitation centre of "Green Balkans" at Stara Zagora city. There the birds will be also ringed for better identification with both individual coloured and standard Bulgarian ornithological rings. Then they will be moved to the release cage at the reintroduction site.

6.4. Accepting, raising and releasing the birds

The activities related to the delivery of the Griffon vultures which will have to be taken by BPPS for reintroduction in VPM will be under the direct control of the Reintroduction Committee and the BVCF. This is valid fror all details concerning this issue – number, sex, age of the birds, time of delivery, transportation to Bulgaria etc. After their arrival in Bulgaria, they will be put under a quarantine of 30 days if necessary. At the moment, in Bulgaria this procedure can be made in the Sofia Zoo and the Wildlife Rehabilitation Centre of the "Zeleni Balkani" NGO in the city of Stara Zagora. If the birds are quarantined in some of the above mentioned places in advance, it would be necessary to purchase the cages to be used with the colleagues who work there.

After the quarantine period the birds will be moved to the cage built on appropriate site in VPM. The exact location of the cage will be determined after the experts from the Committee of Reintroduction assess the appropriate places near the village of Dolno Ozirovo.

6.5. Marking the birds

Simultaneously with placing the birds into the reintroduction cage, they will be marked. For this purpose, standard metallic ornithological rings provided by the Bulgarian Ornithological Centre at the Bulgarian Academy of Science will be used. The birds will bear additional plastic colour rings for recognizing the individuals.

Further to this, BPPS intends to perform radio tracking of the birds. This will be done in close coordination with BVCF and other European organizations and experts.

6.6. Raising the birds in the reintroduction cage

Birds will be fed one or two times a week with carcass and viscera of domestic animals. The cage will be cleaned when necessary, possibly at bigger periods of time, with the purpose of not getting the birds used to human presence (i.e. avoiding the imprinting effect). During these activities, everything possible will be done so that the birds have the least possible contact with humans, and to make the human presence as unnoticeable as possible.

Regular observations will be carried out. The information obtained will be recorded in a separate diary, and the main parameters to be monitored will be as follows: health condition of the birds, behaviour, partner inter-relations (if any), given and consumed quantity of food, other bird and mammal species attracted by the remaining food, etc.

The security guarding of birds placed in the cage will be executed by members and volunteers of BPPS, local people, forestry and VBNP personnel.

During the raising process, constant and routine information will be exchanged and cooperation on different issues will be sought from experts of BVCF and the Reintroduction Committee, as well as with colleagues from other organizations (FWFF, Zeleni Balkani, BSPB, SEMPERVIVA etc.).

6.7. Release in the wild

The birds' release will comply with the French experience in releasing the Griffon vultures for the aims of reintroduction (11). This will happen in the autumn so that the birds will have enough time for adaptation until the winter and the possibility of early migration from the region will be negligible. Before the release, any access of people to the cage (only one single person will feed them, as inconspicuously as possible) and all other interventions on the birds will be ceased in the period prior to release. The cage will be opened for free flying away, and food will be put on appropriate places at the terrain around the cage. Appropriate day with respect to meteorological conditions will be chosen. In the period of release and adaptation of the birds to the terrain, all the available human resource of BPPS, volunteers, employed staff of VBNP, colleagues from the other organizations (FWFF, Balkani, Zeleni Balkani etc.) will be invited to cooperate. Before and after the release, publicity among the local people will be deliberately sought with the purpose of protecting the birds, collecting information for them, affiliating the local community to the idea and subsequent activities related to the reintroduction of the Griffon vulture in VPM.

6.8. Post-release activities

After the birds have left the cage, they will be tracked for any movements across the region. Their physical condition will be monitored and, if needed, weak or exhausted vultures will be taken back again. Food will be provided in accessible and safe places across the area. We will also track whether or not the birds have succeeded to find the food provided. Places and situations of potential risk will be monitored in order to avoid traumas

or possible death. The birds' movements across the area (search for food, spending the night, coupling, mutual relations with other species etc.) will be observed. Especially strict will be the observation for negative human impact on the birds and, as a whole, the attitude of local or outside people to the birds after the release. On the feeding platform, carcasses will be provided all the time. The level of platform's acceptance by the birds and the frequence of their visits there will be specially monitored, too.

After the equipping the birds with radio transmitters, they will be radio tracked. For this part of the project, BPPS will consult the BVCF and the other European partners and experts, because in Bulgaria this activity is still very underdeveloped and there is very limited practice in radio tracking as a whole.

For all post-release activities, information will be provided on a regular basis to the local mass-media in order to achieve better conservation of the birds and to receive actual information from the locals concerning the location and movements of the birds, any accidents with the birds observed (if any) etc.

6.9. Preparatory activities of BPPS for reintroduction

From 2003 to 2005 the BPPS has carried out the following major activities, which precede the reintroduciton and are important prerequisite for its future start in VPM:

- Information campaign. Active social work has been done within the target groups – hunters, farmers, forestry officers, etc. The local public has been informed many times and in many ways about the activities of BPPS in the conservation of the Griffon vulture, the Egyptian vulture and the other birds of prey (through shows in the local TVs and radios, newspapers etc.). Meetings with the punitive detachments were carried out. At these meetings they were informed about the project activities. An abundancy of information materials were spread out – a brochure of the BPPS titled "Introduction of the Griffon Vulture as nesting species in the Vrachanska Mountain (circulation 2000 copies), the Bulgarian version of the French poster titled "Save the Vultures!", many different types of posters for conservation of the birds of prey and nature as a whole issued by the BPPS, Zeleni Balkani, BSPB and other environmental NGOs. In 2005, a regular publication of a full-colour newsletter about the VBNP activies has been started, with a special focus on the territorial range, the richness and the significance of the biodiversity and the natural landscapes conserved there.

The information campaign will progress in two main directions – acquainting the local people with the activities of BPPS directly related to attracting vultures to VPM and minimizing the negative factors, with the main focus being put on hunting and poisoning. These two groups of activities will be carried out through:

- Disseminating materials among the different target groups: huntsmen, farmers, students, etc.
- Using different mass-media: articles in newspapers, radio shows etc. In this respect the film about the vultures shot in 2005 by Hristo Hristov (c/o Edelweiss Club) and provided to the local cable TV operators, which work in the north-west of the country, is a good example.
- Lectures in front of huntsmen, students and pupils, forest rangers, environmental activists from the region etc.
- In 2006, together with FWFF, lectures about poisons will be presented in front of the leading bodies of insitutions in the region: SFD, RFB, REWI, RVS, Directorate of VBNP.
- Regular information and supply of information materials to the mayors of the settlements across the region.
- Work on the problem with wolf and jackal raids on domestic animals in cooperation

with the colleagues from FWFF, Balkani, Semperviva, etc.

- Information campaign among the farmers, especially those who breed their animals on pasturelands (i.e. not in confined farms) and whose pens are situated in remote settlements and regions.
- Multimedia presentations will be organized in the premises of the Municipality of Varshetz and the towns of Vratza, Montana and Berkovitza. The insitutions having any relation to the subject will be invited, as well as students and the wide public. At these meetings, the aims of the Griffon vulture reintroiduction project will be discussed in detail, as well as information from the past, why it has gone extinct, the aims of the Action Plan for Conservation of Vultures on the Balkan Peninsula, why and how the reintroduction is done, the need of support by the local people, etc.
- Construction of a demonstration cage at an appropriate place (in the region of the cave Ledenika on the territory of VBNP). At this site, the visitors of the region will be able to observe Griffon vultures from close proximity. A sign with information about the species and the project is going to be put in front of the cage. This will be also a good opportunity to attract volunteers and new members to BPPS from the region, as well as visitors. The cage will hopefully attract future sponsors as well.
- Publishing information materials specially dedicated to the reintroduction project. This is going to be realized through 2 full-colour brochures: one in 2000 copies and another one in 4000 copies. They will be used for informing local people in easily understandable language about the different aims and activities of the reintroduction project. These materials will also have another very important goal: decreasing the negative factors (especially the shooting). Phone lines will be established at which people could call and announce observations of Griffon vultures, birds in distress etc. A colour sticker in 1000 copies will be printed, too.
- At particular important stages of the reintroduction process (arrival of the birds, accommodating them in the cages, placing them in the demonstration cage for Griffon vultures, preparation for release and the release itself, the monitoring, etc.) especially strong media bias will be exercised with the purpose to attract a support by the local people.
- For conducting the information campaign, BPPS will do everything we can make to co-ordinate these activities with the other Bulgarian organizations working on projects for vulture conservation. This way we will seek for a wider representation of the separate projects and the Action Plan as a whole, and whenever possible, in front of a bigger audience from the whole country.

Building a platform for artificial feeding of vultures. Before doing this, BPPS carried out (between 2003 and 2004) an extensive preliminary work on determining the exact place suitable for the purposes of this project (trial feedings, clarification of the land property), receiving an authorization from the MoEW, the REWI Montana, the Varshetz Municipality (the latter provided us with 2 dka of communal land for 10 years, free of charge) and the VBNP Directorate. In the summer of 2004 the BPPS built up the platform above the village of Dolno Ozirovo, on the territory of the VBNP. During its construction, our organization was welcomed on a local level and supported by the Mayor of Dolno Ozirovo and the Varshetz Municipality. The platform‘s area is 2 dka. It is surrounded by solid fence (concrete poles and thin metal net, wth concrete foundations along its full length in the ground). The location is open cliff area of a hill at about 400m a.s.l. and with appropriate exposure.

System for collecting waste meat (carcasses) of dead domestic animals. During the past years BPPS developed and continues to develop this system in the villages around the region of the VPM and the adjacent regions. The system already works very well and gains higher and higher popularity among the local people. It is supported by the local

veterinary authorities from whom we have official permission and received instructions for proper doing this activity.

Monitoring. BPPS conducts regular all-year-round monitoring on the territory of VPM and other adjacent territories of Northwestern Bulgaria (Western Stara Planina, Western Predbalkan, some lowland territories). In this respect we emphasize on carrying out observations of the habitats appropriate for the Griffon vulture (rock massifs), some of which are old nesting sites of the species, legal and illegal dunghills, etc.

Work towards minimizing the negative factors for the vultures and the other birds of prey. This extremely important activity was targeted at two directions: poisons and shooting. Concerning the poisons, BPPS carried out a large-scale campaign for collecting information on this issue. So far we have not found whether there are new cases of using poisons against big carnivore mammals. This conclusion was confirmed by the official replies sent in response to our letters to the RVS, RFB, SFD, VBNP and the Natural History Museum in Belogradchik. BPPS disseminates across the region the posters issued by FWFF about the poisoning issue. In 2006 seminars are planned in which high-rank representatives of the above mentioned insitutions will take part. In relation to the issue “birds of prey shooting by hunters“, BPPS spreads out our own poster issued especially for these purposes. The organization also conducts an information campaign among the hunters. However, the situation and the problems concerning this issue are hard to solve quickly, especially without serious and devoted participation of the state institutions. Because of this, in the forthcoming years BPPS will direct its greatest efforts at the maximal mitiogation of this problem, which in fact is the biggest risk for the vultures and the other birds of prey in Northwestern Bulgaria.

The raids of wolves and jackals on domestic animals. The problem appeared after the start of the BPPS’ work in the region. Then, some local people started to relate the attacks of wolves on domestic animals to the vultures’ feeding (with the argument that wolves were attracted to the carcass provided for feeding the vultures). In 2005 our organization conducted a research about the problem in VPM and some other adjacent regions (oral and written inquiries to the municipalities of 42 villages). The results showed that the localization of such raids in the region of the platform does not exceed the average one for the region. Also, such attacks are not something uncommon in many regions of Northwestern Bulgaria throughout the period 1990-2005. In 2006, BPPS will popularize this results among the local community. They will be also provided to colleagues from other organizations around the country with the idea to find a way to solve this problem in Northwestern Bulgaria. In 2006, the colleagues from FWFF will provide a few Karakachan dogs for guarding the sheep herds. BPPS has made the first steps in this direction together with the colleagues from the SEMPERVIVA Association, who have an extensive experience in breeding this indigenous Bulgarian dog breed.

Partner relations. In the past years, BPPS developed a number of good partnerships, which assisted a great deal and will continue to assist the BPPS activities in the region of VPM. BPPS has signed an agreement for collaboration with the Directorate of VBNP with which the organization has worked out this Viability Study. Our NGO works in close partnership and has the support of the Municipality of the village of Dolno Ozirovo (in whose land the platform is situated), the Municipality of Varshetz, REWI Montana, REWI Vratza and REWI Sofia, RVS Montana, RFB Berkovitza etc. BPPS works in close co-operation with the colleagues from the other organizations working in Bulgaria on the Action Plan for the Conservation of Vultures on the Balkan Peninsula: FWFF, Zeleni Balkani, BSPB, as well as Balkani and SEMPERVIVA. Also, BPPS exhanges information with colleagues working on the same Action Plan in Serbia and Montenegro: Bratislav Grubach and Sasha Marinkovich, as well as in FYR Macedonia: Methodi Valevski.

6.10. Human resources

BPPS team does believe that it has enough capacity of experienced and motivated people to work on the reintroduction of the Griffon vulture. There are also several local people which could be included in these activities. In case there are enough funds available, the human resources will be not an obstacle for the reintroduction.

BPPS has 3 persons as full-time staff and 4 people working part-time. The members of the organization are 35 in total.

At the start of the reintroduction programme, BPPS intends to popularize it among the people of the region. This holds true especially for the towns Vratza, Montana, Varshetz, Berkovitza, Mezdra and Svoge, where a lot of youth is available in the schools. There are secondary schools in these towns (grade VIII-XII) with a biology profile, and the students show strong interest in biology. BPPS led some prior talks with certain teachers and head-masters in such schools. We've been assured that many students will take part in a future popularization campaign or in a fieldwork. The above relates to schools in Sofia as well, but the problem is that the capital is more far away from the VPM (about 100 km).

BPPS has a preliminary agreement also with the Directorate of VBNP. A local organization titled "Club of the VBNP friends" is established by and works in close cooperation with the Directorate. About 100 people are members of this club. They share the love to nature and a willingness for conservation of this nature park. There is a possibility for attracting some members of the alpine and cave clubs in Vratza (with whom BPPS has close contacts) for concrete fieldwork during the reintroduction process.

BPPS intends to attract adherents who will take part in the reintroduction programme among the students in some universities – Sofia University (the Faculty of Biology), the University of Forestry and Landscape Architecture, New Bulgarian University etc., and some branches of other higher education institutions, mainly in Vratza.

All the above mentioned possibilities for attracting people count towards the 'volunteers' category. However, it is very important to clarify the difference between the concept of 'volunteer' in Bulgaria and in Western Europe.

Based on the unfavourable economic situation in Bulgaria and the experience of BPPS in the work with volunteers, in practice most of these people would take part at their own expense in separate rare cases only. The reality shows that, in order to be able to count on volunteers, BPPS has to cover the travelling costs to Vrachanska Planina and the transport within the area as well. In some cases, this also includes covering the expenses for accommodation and some daily allowances.

BPPS intends to popularize the different initiatives connected to the reintroduction in the Internet sites of nature enthusiasts, mountaineers etc. in order to gather adherents and supporters, new members, volunteers. Such Internet sites are visited by many people with distinct interests in nature and this is a very vital opportunity for attracting more people to the project.

Certain experts from VBNP, REWI Montana, REWI Vratza and REWI Sofia, as well as ecologists from the municipalities in the region around VPM and the adjacent territories, will take part in the reintroduction programme.

BPPS maintains close contacts and has preliminary agreements with colleagues from the FWFF, Balkani, Zeleni Balkani, BSPB, etc. for including their members in ceratin field activities in the region of VPM. This is especially crucial having in mind that these people are specialists in the sphere of nature protection – i.e. theoretically grounded and with strong field experience. After the start of the reintroduction of the Griffon vulture in Vrachanska planina, there will be a possibility for VBNP to create a regional branch of the organization in the Northwestern Bulgaria. This will in turn create additional opportunities

for attracting new people to the organization on local level, and will enhance the level of acceptance of our activities within this programme and in general.

6.11. Support by the local administrations

After 2 years of intensive work with the local administration, it could be concluded that our activities are supported by the local and regional authorities. In some cases, there were shorter or longer delays but it is due to the traditional bureaucracy, and not because of unwillingness to cooperate. There are good working relations established with all the main authorities in the region as follows:

- The Municipality of Varshetz and almost all the villages in the region.
- The Regional Veterinary Services in the cities of Montana and Vratza.
- The Regional Inspectorates of Environment and Water in the cities of Montana and Vratza.
- The Vrachanski Balkan Nature Park Directorate, who is traditional partner of BPPS (there are Memorandum of Understanding and Contract for Cooperation signed which provide a legal basis for the recovery of the species on the territory of the VBNP).

All the above-mentioned authorities are aware about the possibilities of the reintroduction and support it.

6.12. Economic resources

The finances are always not enough, and probably this will be the main obstacle for the project implementation. In case the reintroduction is approved by BVCF team, BPPS opinion is that additional funds have to assured, incl. from other donors, local companies (for example Holcim Holding Company) etc. Similar approach was used within the Bearded Vulture Reintroduction Project in the Alps.

6.12.1. Budget

A. General costs (in EUR)

No	Activity	2007	2008	2009	2010	2011	2012	Total
1	Release cage	12000						**12000**
2	Sanitary equipment	100	100	100	100	100	100	**200**
3	Car	6000						**6000**
4	Car maintenance	200	400	500	600	700	700	**3100**
5	GPS (2 units)	700						**700**

6	Photo camera	400						**400**
7	Laptop	1000						**1000**
8	Field equipment (tents,sleep-ing bags, climbing equipment, etc.)	1500						**1500**
9	Office rent local	1150	1250	1350	1400	1400	1400	**7950**
10	Office maintenance (power, heat, water)	550	650	750	750	750	750	**4200**
11	Rent of house	300	300	400	400	500	500	**2400**
12	House maintaince (power, heat, water)	200	200	300	300	400	400	**1800**
13	Communication (office phone, mobiles,internet etc.)	1500	1500	1800	1800	1800	1800	**10200**
14	Insurances and taxes	500	550	550	550	550	550	**3250**
15	Accountant	600	660	726	799	879	966	**4629**
16	Project leader	6400	7040	7774	8551	9406	10347	**49518**
17	Local	3000	3300	3630	3993	4392	4831	**23146**
18	Local – part time	1700	1870	2057	2263	2489	2738	**13117**
19	Bank fees	220	220	220	220	220	220	**1320**
	Total general costs							**146430**

B. Direct costs related to the reintroduction activities

Activity	2007	2008	2009	2010	2011	2012	Total
Feeding							
Fuel	1500	1500	1800	1800	1800	1800	**10200**
Veterinary taxes	400	400	400	400	400	400	**2400**
Monitoring							
Fuel	1000	1000	1600	1600	1700	1700	**8600**
Public transport	120	120	150	150	180	180	**900**
Railway	100	100	140	140	170	170	**820**
Per diem	900	900	1100	1100	1200	1200	**6400**
Accommodation	200	200	400	400	400	400	**2000**
Marking of the birds							
Rings	150	100	100	100	100	100	**650**
Radio tracking	6000						**6000**
Information campaign							
Fuel	400	400	700	600	500	500	**3100**
Information materials	1800	1800	2000	1000	1000	1000	**8600**
Per diem	350	350	500	500	500	500	**2700**
Rent a hall	50	50	80	80	80	80	**420**
Total direct costs							**52790**

The budget has been made in compliance with the current prices in Bulgaria for the needs of the reintroduction, known to BPPS to the present moment – October 2006. Judging from the inflation in the country – expected increase in the price of some commodities and services, especially after the accession of Bulgaria to EU in 2007 it can be expected that some of the prices /activities will be modified

7. Conclusions

The reintroduction of vultures in regions of the Balkan Peninsula where they are extinct now, is one of the tools for recovery of the Balkan Vulture Action Plan, BVAP. After 4 years of preparatory work within the BVAP and the compilation of a series of viability studies for the reintroduction of Griffon, Black or Bearded Vultures, the committee of the BVAP travelled in Bulgaria and Serbia to a part of the potential sites and evaluated the conditions of the reintroduction.The trip took place between 21 and 28 of March 2006.

Four of the visited areas have been considered to be suitable for Griffon Vulture reintroduction on a short term, one of them is Vrachanska Planina Mountain. The selected sites are of strategic importance for the Recovery of the Griffon Vulture on the Balkan Peninsula, connecting the existing colonies of western Serbia with those of the eastern Rhodopes by re-establishing historic colonies located in between. Once conditions are given, the reintroduction in southwestern Bulgaria will help to connect again the Bulgarian colonies with the Macedonian ones.

The committee has found that it is possible and convenient to start at more than one place at the same time in order to give the maximum potential for the recovery of the Griffon Vulture on the Balkan Peninsula. In this way, additional objectives will be achieved and more intensive conservation efforts locally will be gained, which will benefit not only the recovery of the Griffon Vulture but also other endangered species and the whole ecosystem. In this sense, it is planned to undertake a Metareintroduction, the sites of which will be connected among them and cooperate for the common goal.

For the last tree years BPPS have worked on the preparation of two viability studies and the implementation of the activities of BVAP in Central Balkan NP and Vrachanska Mountain. The experience gained brought us to the conclusion that natural recolonization of the former Griffon breeding sites is not possible because of the general decrees of the Balkan populations. It has proven that reintroduction is the only adequate step to ensure the future of the vulture species in Bulgaria and on the Balkans. However the most important issue for the start of the reintroduction program in the Balkan Mountain range remains the availability of funds to sustain the activities and we hope that this study will convince people and organizations to support it.

8. Acknowledgements

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9. Glossary

APC – agriculture production complex (superior unifying structures on regional level in the field of stock-breeding and field farming, which existed nationwide during the socialist times, up to 1990).

Area - the territory of the Nature Park “Vrachanski Balkan”

a.s.l. – above sea level

BPPS – Birds of Prey Protection Society, Bulgaria

BSPB – Bulgarian Society for the Protection of Birds

ETN – electric transmission network

FWFF- Fund for the Wild Flora and Fauna, Bulgaria

Karakachans – nomad shepherds who arrived with their herds from Greece to Bulgaria around the end of the XIXth century.

Mihailovgrad – the old name of the city of Montana and its district until 1992.

MoEW - Ministry of Environment and Water

Municipality – a small local administrative unit, a part of the larger district unit.

Park administration – the management and administration body of the VBNP

RFB – Regional Forestry Board, a regional section of the National Forestry Board (NFB), which is functioning within the Ministry of Agriculture and Forestry (MAF).

REWI– Regional Environment and Water Inspectorate, a regional section of the Ministry of Environment and Water of Bulgaria.

RVS – Regional Veterinary Service – a local veterinary unit subordinated to the National Veterinary Servic (NVS) which is functioning within the Ministry of Agriculture and Forests (MAF).

SFD - State Forestry Department (regional sub-unit of the RFB)

TETN – transformer within the electric transmission network

TKZS – from Bulgarian: Trudovo-Kooperativno Zemedelsko Stopanstvo – “co-operative agricultural collective farm” (a local structure subordinated to APC in the field of stock-breeding and field-farming. This structure existed during the socialist times, up to 1990).

Town Council – the smallest administrative unit, it is part of the municipality.

TL – Transmission lines of the electricity network.

VBNP –Vrachanski Balkan Nature Park

VPM – Vrachanska Planina Mountain (the bigger part of its territory is part of the VBNP.

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VIABILITY STUDY

on reintroduction of the Griffon Vulture (Gyps fulvus) in Stara Planina Mountain BULGARIA

Central Balkan National Park Reintroduction Site

BVAP
Balkan Vulture Action Plan

BIRDS OF PREY PROTECTION SOCIETY

February 2007

Viability study on the potential for reintroduction of the Griffon Vulture (*Gyps fulvus*) in Central Balkan National Park, Bulgaria

Prepared by the Birds of Prey Protection Society with the cooperation of Central Balkan National Park Directorate 2007

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***Birds of Prey Protection Society (BPPS)**
****** Central Balkan National Park Directorate**
******* Bulgarian Environmental Partnership Foundation**

Table of contents:

Glossary

- Area – the territory of Central Balkan National Park
- BPPS – Birds of Prey Protection Society
- BSPB – Bulgarian Society for the Protection of Birds
- BVAP – Balkan Vulture Action Plan
- BVCF – Black Vulture Conservation Foundation
- CBNP – Central Balkan National Park
- CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora
- FZS – Frankfurt Zoological Society
- LPO – Ligue pour la Protection des Oiseax (LPO)/ BirdLife France
- NDP – Central Balkan National Park Directorate
- NP – National Park
- PS – park section, i.e. one of the seven sections in CBNP
- The Directorate – Central Balkan National Park Directorate
- The park –Central Balkan National Park
- Tazha park section – this is the actual reintroduction site where the release cage is to be constructed and where the feeding place are located. This is the most eastern part of the National Park.

1. Introduction

Until the beginning of the 20th century, the Griffon vulture (*Gyps fulvus*) and the other three European vulture species were present in numerous populations on the territory of the continent including the Balkan Peninsula. Feeding on carrion, they have played an important role in the natural balance, preventing the spread of dangerous diseases. With the development of the traditional livestock breeding and the decrease of the populations of wild ungulates in Europe the vultures became strongly dependent on man-raised animals(11,12). Realizing vulture contribution to old-time hygiene men deeply respected them and lived in peace with these natural sanitarians for centuries. It was not that long ago when people from the country would drive their dead cow to the nearby hilltop and leave it to be cleaned by the vultures. Because of their role and impressive looks many nationalities accepted these birds as sacred creatures and symbol of greatness, along with the eagles.

In the end of 19th and the beginning of 20th century the fate of the vultures underwent a dramatic change. Almost all over the continent they were officially proclaimed as pests along with all the raptors, and brutal persecution took place. They were hunted and killed in various ways but still it was hard to destroy thousands of birds.

The popular by that time use of poisonous meat baits against carnivores came to be the worst weapon against vultures and raptors even though it was not meant for them. They would gather in big numbers to a single poisoned carcass to die minutes after they had had a bite.

Around the middle of the 20th, at the time of the livestock breeding reform, this fearsome practice inflicted a final blow to the vultures and brought all four species to the edge of extinction from the European fauna.

That same scenario was applied on the Balkan Peninsula – an important part of the former European area of the species. The decline in the vulture populations also affected our country, Bulgaria, where these remarkable birds once bred in thousands, enjoying the suitable habitats and favorable living conditions.

In the middle of 20th century the Griffon vulture became extinct from Bulgaria as a nesting species. The main reasons were again the poisonous baits; the reduction in the traditional ways of livestock breeding. In a short term the same sad fortune was shared by the other two large vultures, i.e. the Black and the Bearded.

In 1978, a small Griffon colony was discovered in the Eastern Rhodope mountain, in the Southern part of the country near the border with Greece. Throughout the years that followed thanks to the continuous efforts for conservation of the species their number slowly increased. Today it is about 130 birds and 33 nesting pairs but with no increase in the last few years. The only Bulgarian colony gave us hope to the future of the species here but still the isolation and occasional human disturbance are limiting factors for the population to increase.

The future of the Griffon vulture in Bulgaria, as well as on the Balkan Peninsula remains unstable and unpredictable. Although some of the threats do not exist anymore or are reduced to a very small scale, the population is fragmented and insufficient. While there are still suitable habitats, there are not enough birds to re-colonize naturally the former breeding sites. Resolute conservation aid is needed to enable the survival of this remarkable bird and to preserve it as part of Europe's natural heritage.

This Viability Study presents a survey of the resources and the potential of Central Balkan National Park (Photo 1**)**, Bulgaria to sustain Griffon vulture reintroduction.

Photo 1. The eastern ridge of Central Balkan National Park (Tazha park section) – a vast plateau like landscape cut by numerous cliffs and gorges. It lies in the central part of the 500 km long ridge of "Stara Planina" - the Balkan Mountain range. It is used as a natural highway by Griffon vultures in their east – west migrations.

2. Objectives

2.1. Objectives of the reintroduction of the species in CBNP

- To re-establish self-sustainable population of Griffon Vultures in the CBNP;
- To secure the long-term survival of the species in the country and on the Balkan Peninsula;
- To use Griffon Vulture reintroduction as a promoter for ecosystem conservation;
- To improve the environment for carcass-feeding birds of prey in the CBNP;
- To restore the natural biological diversity;
- To improve BPPS capacity and to provide experience, know-how and skillful staff and volunteers for possible future reintroduction activities with the Bearded Vulture;
- To promote nature conservation awareness among the local people and park visitors;
- To contribute to the economic development of the local communities.

2.2. Objectives of the viability study

- To perform an assessment of the features of the area and their capacity to sustain the species reintroduction;
- To define possible threats which can negatively affect the reintroduction process;
- To lay down the strategy and methods of reintroduction, time table and budget.

3. The Griffon vulture *(Gyps fulvus)*

3.1. Biology

Order: Falconiformes.
Family: Accipitridae. (Old World vulture).
Scientific Name: Gyps fulvus.
Common Names: Eurasian Griffon or Griffon Vulture.

Conservation Status: Threatened. Reduction in numbers due primarily to lack of food and poisoning. Still reasonably abundant in Spain and France; Balkan numbers have also diminished greatly.

Geographic Range: Asia, North-western Africa, India and Turkey. Very small numbers on the Balkans, Sardinia, Cyprus, Crete, and Sicily. Even in very cold areas, Eurasian Griffons are resident throughout the year and have a special metabolism which enables them to conserve the needed energy to survive the worst winter periods.

Habitat: Rocky coasts, or mountainous regions with open areas.

Physical Characteristics: The Eurasian Griffon is about 100 centimetres long and has body plumage which is predominantly brown. Wings and tail are black while the neck and head are of a white down. The base of the neck has a collar of creamy white feathers and the bird is able to withdraw its entire two feet long neck

and head into this ruff. Immature birds can be easily distinguished as this collar remains brown until maturity. The Eurasian Griffon croaks, growls and whistles, but will do so only at feasts and in family groups. Flight is always done in complete silence.

Flight: Griffons can soar for 6 to 7 hours, or 100 miles. They often require steep cliffs or mountains to help them in taking off. It can soar as high as 3300 meters, but has been recorded at heights of up to 9000 meters. Descending on a carcass, the bird can dive at over 100 miles per hour. They are one of the fastest vulture species.

Food: Like other vultures it is a scavenger **(photo 2)**, feeding mostly from carcasses of dead animals, which it finds by soaring over open areas. It often moves in flocks. They find food by soaring high, scanning the land for signs of a kill, or for stationary bodies. Often, the vultures will wait on the outskirts of a feeding frenzy, closing in once the mammalian scavengers have gone. Their weak beaks are not designed for ripping open fresh hides. They depend on predators or larger vultures to begin the work for them. Once they can access a carcass, the vultures will gorge themselves. At each meal the birds will gorge themselves on up to 5.4 kilograms of carrion. Once satisfied and having the crop, throat and neck distended, they relax back on their tails, and spread wings to provide balance, with the mouth hanging open. It will be about an hour before the meal is digested enough for the birds to take flight once more. The takeoff is very labour-intensive involving much running and leaping across the plains.

Photo 2. Griffon vultures feeding on livestock carcass in the Eastern Rhodopes.

Reproduction: Nests in the hollows of rocks, on cliff ledges or in caves, usually in colonies. The single egg is white with red spots and takes between 48-54 days to hatch. The female Eurasian Griffon will rarely leave the nest from the time of laying the egg until her young has taken flight. Consequently, the male vulture must provide food for all of them. He settles on a nearby ledge and regurgitates food, sorting out the contents with his beak. The female takes the larger pieces for herself and feeds the smaller pieces to the whistling chick. The young develop plumage at around 70 days and first fly at 110-115 days.

Behaviour: Griffons are very social, living and nesting in colonies of 15 to 20 pairs. Sometimes more than 100 pairs compose a colony. After feeding on a carcass, Griffons often gather at a watering hole to bathe. They are dominant over most of the other vultures in their range, except for the cinereous and lappet-faced vulture.

Life Cycle: Griffons are mature enough to breed after 7 years, and live around 40 years.

3.2. Distribution in Bulgaria and adjacent colonies

Currently, the Bulgarian population of the Griffon vulture outnumbers 130 birds with 33 breeding pairs (BSPB, 2005). They are separated in two small colonies in the Eastern Rhodope Mountain, in the Arda river valley, near the Bulgarian – Greece border.

Despite the existing suitable habitats only single birds and small parties have been observed in the last twenty-five years in other parts of the country. Most often wandering Griffon Vultures have been observed in Stara Planina (the Balkan) mountain – West Balkan and Vrachanska Mountain, Central Balkan National Park and the Eastern Balkan. Other places of vulture observations are Western Rhodope, Rila, Pirin and Osogovo mountains. Observation has taken place mainly in the summer months and their stay is reportedly relatively short. In some cases with more food availability, the birds have stayed in the area up to two–three months.

South of the Eastern Rhodope colonies, across the border is located the Greek Griffon Vulture. The population is small and unfortunately disappearing. The same is valid for the Macedonian population which suffered heavy decline in the last years, most probably due to poisoning. The Serbian population is relatively stable, separated in two main colonies in central Serbia. The Croatian population, in spite of a bad incident in February 2005 when 19 vultures were poisoned, is also stable. All parties involved in the BVAP were optimistically encouraged with regard to the situation in Ukraine, when in 2004 about 30 pairs where discovered, along with 20 pairs of Black Vulture.

3.3. Historical data from the area

Until the late 40s of 20th century the Griffon Vulture inhabited all appropriate habitats in the region of Central Stara Planina mountain and the territory of the present Central Balkan National Park. Unfortunately, there are only a few publications mentioning the species from this period. Moreover, all of them are not definitive regarding the location of the particular colonies and their numbers. Only general comments are given about the numerous “vultures and eagles”.

Another source of information are the elderly people locally, who live in the settlements around the park territory. However, even amongst them it is hard to find a person old enough to keep memories of the vultures himself. We have talked to many elderly people known to have spent most of their life in the mountain. Some reported that when they were kids there were big birds gathering on livestock carcasses, while most retold stories of their father about many “white-headed eagles” eating on dead animals in the Triglav range.

After this period the population collapsed and during the last forty years only single pairs and birds have been observed occasionally. However we managed to collect some more precise data.

Based on the data compiled, there are the following historical observations of Griffon vultures on the Park territory (see map 1):

- in 1941 about 60 Griffons were found dead after feeding on poisoned cow carcasses near the village of Anton, located on the South-Eastern edge of the park. The nesting cliff inhabited by these birds has reportedly been on a nearby cliff, which currently belongs to the park territory. Reported by a local elderly person.
- 10 Griffon vultures inhabited the “Kuru Dere” gorge (located on the South-Eastern edge of Triglav rang, photo 3) for some years before they were poisoned with strychnine sometime in the 1960s. Reported by Mr. Kostadin Krustev who worked as a forester from 1952. He mentioned that in the area there were 30 000 sheep until the nationalisation of private property in 1956. Today “Kuru Dere” gorge is one of the park reserves named “Sokolna”. It features abundance of limestone cliffs.
- one specimen near Botev peak and one near Rusalka peak during 1960s – poisoned birds (indicated with blue on map 1)
- one pair has been regularly observed in the Vejen peak area in the period 1965–1973 (indicated with green on map 1)
- one pair near the Stara Reka nature reserve in the beginning of the 80s (showed with red on map 1)

- 4 Griffon vultures feeding on a dead foal, observed by a shepherd around 1982 at the mountain pastures above the village of Tazha. Reported by Ivan Martinov, shepherd.
- two birds observed near Vejen Peak on 19.09.1984 (indicated with green on map 1)
- two birds on the same place in 1985
- one-year-old Griffon Vulture caught on 23.06.1986 near the village of Mirkovo, approximately 12 km west of the park border. (indicated with a red arrow on map 1) The bird was sent to Sofia Zoo.

Photo 3. Thee numerous, inaccessible limestone cliffs of "Sokolna" reserve in Tazha park section have always presented favourable opportunities for nesting of large raptors. Here was one of the last sanctuaries for the Griffon vultures before to get extinct from the mountain in the mid 20th century.

3.4. Present observations in the area (see map 1):

- In the beginning of the 1990s – one Griffon Vulture, observed by local hunter near Vejen peak (indicated with green on the map).
- One bird near Triglav peak in the summer of 2000 (indicated with yellow on the map).
- One specimen observed feeding on a dead horse in September 2000, near Tazha hut – Tazha park section (indicated with a white arrow on the map).
- Two birds feeding on cow carcass near Botev peak in the summer of 2001 (indicated with blue on the map).
- one Griffon vulture near the "Kademliisko Pruskalo" waterfall, upper Tazha river. Reported by Mr. Daniel Stoychev from Tazha village, aged 31, July 2002.
- Observation of 7 Griffon vultures near Botev peak feeding on a cow killed by lightning (indicated with blue arrow on the map). Reported by a local BPPS volunteer, July 2003.
- One adult bird near Koprivshtitsa (10 km South from the park) in the morning of 11 June 2005. The bird was soaring above shepherd pasture and flew toward the Central Balkan National Park (indicated with green arrow on the map),
- One bird observed on 18.08.2005 at the "Sweet Water" park ranger outpost near Tazha river gorge. Reported by Todor Todorov, park ranger.
- Around 10 of November 2006 four Griffons were observed by a local hut keeper near a place with carcasses of 20 semi wild horses killed by a lightning in the beginning of September (photo 4).

Photo 4. Each year lightning accidents with livestock on the mountain ridge pre-sent of Central Balkan National Park present a feeding opportunity for vultures. This particular photo was taken in September 2006 when 20 semi – wild horses got killed from a single lightning.

Data regarding the other vulture species in the present park territory:

- Egyptian Vulture – the last pair in the park was observed in the beginning of the 1970s.
- Black Vulture – the last pair was observed in Steneto nature reserve (showed with black on the map), in the middle of the 1970s.
- Bearded Vulture – until the beginning of 20th century occupied all appropriate habitats in region.

3.5. Reasons for extinction from the area

The reasons for the Griffon Vulture extinction (as well as for the extinction of the other three species) are identical with those in other parts of the country.

3.5.1. Poisoned baits

Poisoned baits are without any doubt the main reason for the dramatic decline of the population. The widespread use of poisoned baits was proclaimed as the most effective tool against the terrestrial predators, mainly wolves. This practice was in use from the beginning of the 20th century, but reached its peak in the 1940s. The park territory was no exception. In the course of a conversation, a local man from the village of Anton, near the South-West edge of the CBNP border could remember a case of poisoning which caused the death of about 60 Griffon vultures. It was in 1941 when about 25 cows had died from a disease. Several local boys received jars with powder which they had to put on the cows carcases. After several days, when the man (at that time little boy) visited the mountain meadow where the carcasses were, it was full of dead Griffon vultures, about 60 birds (or "…white-headed eagles" as some people still call the Griffon Vulture). This represented the entire local colony which bred on several relatively small rocks in the surroundings. Thus, it was exterminated within a few days.

3.5.2. Lack of food

Lack of food was the second main factor, which had impact even bigger than shooting.

Central Balkan National Park includes 27,558 ha of mountain pastures and 111 ha of meadowland. With an ordinance, Central Balkan National Park Directorate regulates that grazing of any livestock (cows, sheep, horses, but not goats) is permitted in most of treeless zone park area treeless zone.

For hundreds of years until the beginning of the century, a significant number of animals have grazed on the ridge of the Central Stara Planina mountains. Thousands of sheep grazed at high-mountain pastures in the summer months. The closing of the borders with Greece and other factors contributed to the decline and disappearance of the specific breeding practices of Karakachan shepherds, and significantly reduced the presence of livestock in present day

National Park. The impact of the agricultural collectivisation imposed during the 1950s decreased the use of high-mountain pastures even further. The decrease in the numbers of cattle and sheep was particularly visible in the post-1989 period of socio-political and economic changes. Most dairy farms in the mountains were abandoned or destroyed.

Until approximately 15 years ago, animal farming was the main livelihood of the populations of most settlements in the area. Some of the larger industrial centers such as Troyan, Teteven, Sopot, and Karlovo are exceptions. Traditionally, livestock breeders from the Northern municipalities took more animals to high-mountain pastures as compared to those from the South.

Recently, however, a slight increase in livestock grazing on the territory of the National Park has been observed. Currently, grazing is carried out in the high-mountain pastures near the settlements, especially where there is water, good quality grass stands and possibilities for camps. Thus, the same pastures are visited by herds from several urban areas , while other more remote pastures are not visited at all. This has led to irregular use of the pastures and to under- and over-grazing.

Between the 1970s and 1990, in the Eastern part of present park territory a big hunting reserve existed with very restricted access. Thus, even the few shepherds left were allowed to graze their herds only in the low foothills of the mountain.

Another factor was that organised veterinary control reduced the mortality rate among domestic animals on one hand, while on the other dead animals were transported to special places for glue and sub-products production, thus depriving the vultures from access to food.

* Karakachan – an ethnos, with Greek origin and characteristic nomadic culture. Their livelihood was based and organized around breeding numerous herds of the nearly extinct by now, Karakachan sheep. Their way of living evolved around transhumance, winter was usually being spent near the Greek part of the Mediterranean Sea coast. For the spring and summer months they moved to the Bulgarian mountains.

3.5.3. Shooting

This practice was also a significant factor for the population crash. There is no reliable data for the years before the turn of 20th century, which can provide an idea how many birds were shot. However, such data exists for the period after the turn of the century. From the early 1950s till early 1970s between 30 000 and 70 000 birds of prey were killed annually. In this period obtaining a hunting license was tied with the hunter providing a certain number of legs of birds of prey and corvids. Most probably in this period shooting was the reason for the extinction of the last individuals which somehow had succeeded to avoid the poisoning.

3.5.4. Habitat destruction

This threat does not rank among the significant factors for the Griffon vulture decline in Bulgaria. In some places there were colonies destroyed or better forced to leave the breeding cliffs due to railway construction or quarry exploitation. However, this was a factor with local importance. On present territory of the CBNP and its wide surroundings habitat destruction never existed. No railways, roads and quarries were built. Clearings were cut and in some places around the park the forestry work still continues. Still, this practice is not a habitat destruction factor vis-à-vis Griffon vultures.

4. Reintroduction – experience, strategy, cooperation

Throughout the last tree decades, a number of successful reintroduction projects have been implemented in Western Europe. Thus was initiated the return of the vulture to some of its formerly extinct populations or areas nearby. As a result of reintroduction programmes some viable vulture colonies are already established in Spain (5) and France (4,15). Now they have become a source of birds for new reintroduction projects. Successful reintroduction and restocking projects also involved the other two large European vultures – the Black and the Bearded. Recently the fourth member of the family - the Egyptian vulture was included in the conservation activities.

The most outstanding projects are the reintroduction of Griffon Vultures in Grand Causses in France (LPO, started 1981, established colony of 140 breeding pairs); the reintroduction of Bearded Vulture in the Alps (FCBV, started 1986, seven breeding pairs in 2003); the restocking of the nearly extinct Black Vulture population in Majorca (Spain, the Balearic Government and BVCF, started 1984, the population increased from less than 20 birds to 90 in 2002 and from 0-1 breeding pair to 10); and reintroduction of Black Vulture in Grand Causses in France (LPO and BVCF , 1992-2002, resulted in 60 birds and 13 breeding pairs). Actually, there are other projects carried out based on these former experiences. The reintroduction of Black Vulture continues in two more sites in France: Baronnies in Pre-Alps (started in 2004, by Vautour en Baronnies and BVCF) and in Verdon (2005, by LPO, PACA and BVCF). Together with Fundació Territori i Paisatge and the Catalan Government, BVCF is also promoting the reintroduction of the Black Vulture in pre-Pyrenees.

The successful experience with all four vulture species in Western Europe logically brought the attention to the vulture status on the Balkan Peninsula – once comprising an important part of the European population. After the research it was decided that special conservation activities are needed there too.

In the year 2002 the "*Action Plan for the Recovery and Conservation of Vultures on the Balkan Peninsula and Adjacent Countries*"(14) was approved as a joint effort of national and international NGOs. It unites the efforts of the Black Vulture Conservation Foundation (BVCF), Foundation for Conservation of the Bearded Vulture (FCBV), the Frankfurt Zoological Society (FZS), the Foundation for the

Conservation of the Bearded Vulture (FCBV), Ligue pour la Protection des Oiseax (LPO)/ BirdLife France, the European office of the International Union for Conservation of Nature (IUCN), BirdLife International and other national NGOs.

The primary goal of the plan, known as the Balkan Vulture Action Plan (BVAP) is to define, coordinate and support the actions of the organizations working for the conservation of the four vultures species on the Balkans. These include Bulgaria, Macedonia, Serbia and Montenegro, Croatia, and Greece. Recently, Romania, and Bosnia and Herzegovina were included.

In addition, it seeks to use vultures as flagship species for the conservation of biodiversity in the Balkan area, transferring the technology and experience in conservation from the West to the East. The strategy is based on local and international cooperation, in which international organisations provide expertise and funding, while local governmental and non-governmental organisations carry out projects activities.

On the Balkans, viability studies on potential reintroduction projects have been recently carried out by seven different Bulgarian and Macedonian NGOs that have requested their need for training and capacity building on reintroduction methods and issues. Apart from their importance for the recovery of the populations such projects have a great awareness impact, and may be very useful to enhance local awareness and information. BPPS has been one of the first NGOs in sending drafts of viability studies to the BVCF. It has also organised a week long training seminar(in May 2006) for the Balkan NGO representatives involved in the vulture conservation, to learn from the vulture reintroduction initiatives of LPO in France **(**photo 5, 6). Besides this, BPPS has developed two previous projects for BVCF in the framework of the Balkan Vulture Action Plan with very good outcomes. Bulgaria is the country where the implementation of the BVAP is one of the highest. Several NGOs are active participants in the activities, with four of them (including BPPS) having particular projects for conservation of vulture species, covering practically most of the territory of the country.

In May 2005, a Memorandum of Understanding was signed between the BVCF, FCBV, FZS, LPO)/ BirdLife France, seven Bulgarian non-governmental environmental organizations (including BPPS), and the Bulgarian government represented by the Ministry of Environment and Waters. Thus, the Bulgarian institutions declared their support for the BVAP mission, goals and activities.

Initially the BVAP idea was to stimulate natural vulture re – colonization through expanding the existing populations by just eliminating the negative factors. However, the results from the first years of research have led to the conclusion that the minimum number of individuals that is necessary for natural recovery does not exist anymore, therefore it is unlikely to occur in the future.

That led to the decision for reintroduction as the only remaining possibility for recovery of the Balkan vulture population.

An important part of the BVAP strategy is to start with the reintroduction of the Griffon Vulture, and thus create favorable environment for the Black and the Bearded vulture (with even more fragile status) to be reintroduced here too.

In March 2006, the BVAP Reintroduction Committee visited the Bulgarian sites proposed by the local NGO participants and reviewed their viability studies. After discussing all positive and negative aspects of the sites a decision was taken to begin reintroduction at four different places along the Stara Planina Mountain Range in Bulgaria.

With the its range crossing the entire territory of the country from West to East, Stara Planina Mountain Range is of strategic importance for the recovery of the Griffon Vulture on the Balkan Peninsula. It is a natural corridor that will connect the existing colonies in Western Serbia with those of the Eastern Rhodopes and Greece by re-establishing historic Griffon colonies in-between. One of these four sites is Central Balkan NP.

Finally it is important to mention that in 1995 the IUCN/SSN Guidelines for Re–introductions prepared by reintroduction specialist group were published. This is a cornerstone document that specifies the particular strategy and rules that must be followed in every reintroduction attempt in order to ensure that reintroductions achieve the intended conservation benefit, and do not cause adverse side-effects of greater impact.These guidelines will be strictly followed in the Griffon vulture reintroduction on the Balkans.

Photos 5 ,6 . At the training seminar on Griffon vulture reintroduction in Peyreleau , France last May the Balkan NGO participants of BVAP got to learn from the essence of 30 years of reintroduction experience. Lectors from Spain and France led both field trips and indoor presentations. The seminar happened thanks to a twinning project funded be the European Commission and coordinated by BPPS.

5. Central Balkan National Park

5.1. Description of the area

Central Balkan NP is one of the largest and most valuable European protected areas (photo 7). It was founded in 1991 in order to preserve forever the unique nature of Central Balkan Mountain and the traditions and livelihood related to it, in benefit of the society.

Photo 7. View towards the summit of Central Balkan NP and the entire mountain chain – Botev peak (the flat top on the right). The Botev range is neighboring the second highest

According to IUCN criteria the Park's nature reserves, i.e. Boatin, Steneto, Dzhendema, Northern Dzhendem, Kozia Stena, Stara Reka, Peeshti Skali and Sokolna, are 1st category, while the Park itself is 2nd category. The first four are declared as biosphere reserves under UNESCO's Man and Biosphere Program. Central Balkan NP and eight of its reserves are included in the UN List of National Parks and Protected Areas.

In 2003 the Park became a member of the European Protected areas network PAN Parks – an international acknowledgement of its preserved wild nature and good management.

Because of its preserved habitats and exceptional biological diversity in 2006 the Park will be included in the European network NATURA 2000, envisaged to protect species and habitats in accordance with both bird and habitats directives. In 1996 the park was declared Important Bird Area, and in 2003 it was included in the preliminary list of the botanical important areas. It possesses unique geomorphology and exceptional landscape diversity.

In relation with the membership of the Park in the European protected areas network PAN Parks, there are preparations for establishing a compact zone intended to preserve in the long–term, with no human intervention, a nature

model – standard for wild nature. That core area will include reserves basically covering the forest belt as well as high mountain treeless zone territories important for the conservation of the biological diversity. The concept is already completed and criteria for inclusion of potential parts of the park in the core area are currently underway. (3)

Some of the main characteristic features of the park are as follow:

- total area: 71,669.5 ha
- total length: 85 km
- average width: 10 km
- highest peak: Botev at 2,376 meters a. s. l.
- lowest elevation: near the town of Karlovo – about 500 m a.s.l.
- forests: 44,000.8 ha
- treeless area: 27,668.7 ha
- 70% of all ecosystems are natural
- there are 9 nature reserves, with a total area of 20,019 hectares;

Some of the most significant features of Central Balkan National Park are provided below. According to our opinion, these will contribute in great extent to the future Griffon vulture reintroduction.

The Park is:

- One of the most significant natural centres for the protection of biodiversity and wildlife in Europe and Bulgaria, as well as a source of form generation;
- Identified as an area of a high degree of rarity, naturalness, typicality and significance, i.e. as a territory of exceptional biological diversity;
- One of the territories representative of birds of the Alpine biome, as well as of the entire alpine fauna and the species typically related to it;
- One of the most significant ecological corridors in Bulgaria, contributing to the genetic exchange, the free movement and natural links between species in the Carpathians and other European mountains and the Southern regions of the Balkan Peninsula and Asia Minor;
- Home to the largest number of different types of habitats among all three National Parks in Bulgaria;
- One of three protected areas of highest degree of naturalness in Bulgaria (over 70% of the territory of Central Balkan is occupied by natural ecosystems);
- Comprises the only rock complex with century-old forests, rock faces and precipices, as well as the mightiest rock belt in Bulgaria in Djendemite reserve;

- The park, which ranks third in Bulgaria as regards its vertical and horizontal relief articulation;
- Represents a specific system of the deepest and most numerous gorges and canyons in Bulgaria;
- A territory which ensures the survival and reproduction of significant European populations of 39 vertebrate species (13 mammals, 25 birds and one reptile);
- The main potential component for the NATURA 2000, Emerald, Econet and other European ecological networks;
- The largest protected area of beech forests in the world, with the characteristic fauna;
- A breeding ground for a large number of species with world conservation status: 21 vertebrate species endangered on a world scale (10% of the Park's vertebrate fauna), 19 invertebrate species and 10 plant species;
- One of the major centres of endemic species: 10 local endemics, 10 Bulgarian, and 67 species and subspecies of higher plants endemic to the Balkan Peninsula, as well as 168 endemic species of vertebrates and invertebrates;
- A National Park that is home to the largest brown bear population within a protected area in Europe (photo 8);
- An area of numerous scenic landscapes, magnificent precipices, gorges and waterfalls (photo 9);
- The area, which hosts the most numerous and largest (in combined area) nature reserves included within a National Park in Bulgaria;
- A protected area incorporating the largest proportion (28%) of strictly protected zone in Europe (not counting Scandinavia);
- One of the largest protected areas in Bulgaria and on the Balkan Peninsula;
- One of four protected areas in Bulgaria with highest significance for biodiversity conservation;
- A model of the modern approach towards establishing and managing protected areas;

Photo 8. The park is a sanctuary the largest brown bear population within a protected area in Europe

- One of the major protected areas that serve as an example of Bulgaria's fulfilment of its international commitments (the Bern and Bonn Conventions and the Biodiversity Conservation Convention);
- The most important protected area in the world for the Semi-collared Flycatcher, White-backed Woodpecker, Bechstein's bat, Suslick and Mountain Mole rat.

Photo 9. The "Raiskoto pruskalo" waterfall in Kalofer park section - bordering with Tazha park section.

5.1.2. Geographic situation

Central Balkan National Park is located in the central part of Bulgaria (figure 1). Its centre is at 42°41' Northern latitude and 24°44 ' Eastern longitude. It includes the highest peak in Stara Planina mountain (the Balkan) and three parts of the Balkan mountain chain – Zlatishko-Tetevenska mountain (highest peak Vezhen, 2,198 m above sea level), Troyanska Mountain (highest peak Kupena, 2,169 m above sea level) and Kaloferska Mountain (highest peak Botev, 2,376 m above sea level). Botev is also the highest peak in the Stara Planina mountain range. (3)

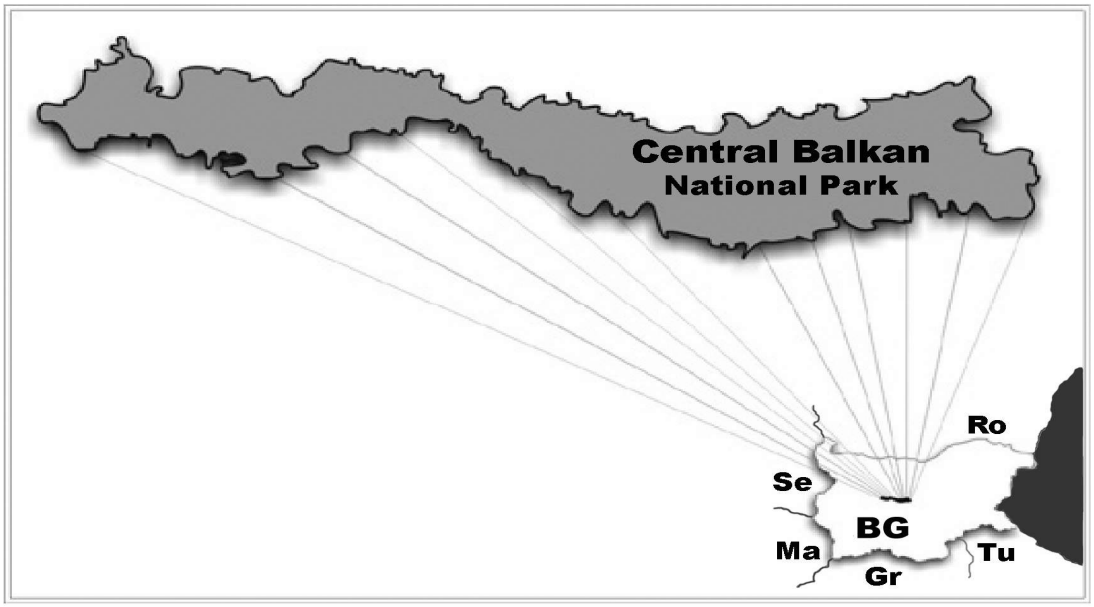


Figure 1. Geographic Location of Central Balkan National Park

5.1.3. Boundaries

The exact boundaries are shown on the map of the National Park (map 1, 2). The park territory within these boundaries is 71,669.5 ha.

The Eastern boundary of the National Park runs along the Eastern and North-Eastern slopes of the Mazalat massif, and most of it follows the Gabrovnitsa river North of Skobelevo village. The Northern boundary follows the line: Mihalia river – peak Mihalia – the saddle valley Kosishki preval –Kositsa peak – Bobcha site.

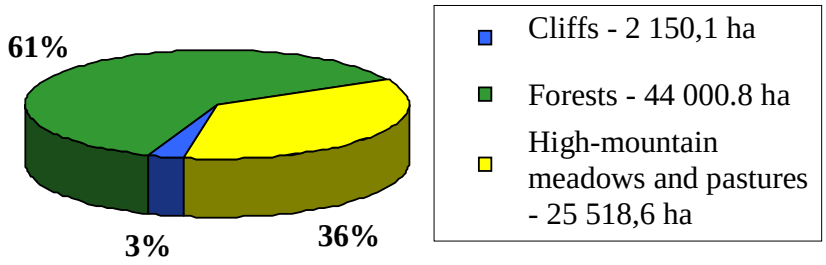
The Northern and Southern boundaries are very curved and follow through a wide range of heights – from 500 m above sea level (near Karlovo and Karnare), to 1,525 m (near Troyan Pass). The Northern boundary follows the line: Golyam Klimash peak – Troyan Pass – Rusaliski Pass – Koritata site. In certain locations (village Ribaritsa) it descends to 600–700 m while in others (Beklemeto, Tabite) it ascends to 1,500 m above sea level. The Southern boundary, sharply curved, follows horizontally along low-mountain and mid-mountain belts, falling as low as

Tazha and Karlovo, and continues to the West to approximately 3 km North of the villages of Karnare, Rozino, Klisura and Anton. (3)

5.1.3. General park area

The National Park covers a forest area of 44 000.8 ha (61%), high-mountain pastures and meadows of a total area of 25 518.6 ha (36%) and 2 150.1 ha (3%) of cliffs (figure 2). The share of each of these territories in the National Park is represented in the figure below:

Figure 2. Ratio of Cliffs to Forests to High-mountain Meadows and Pastures



5.1.4. Reserves

There are nine nature reserves in the National Park – Boatin, Carichina, Kozia Stena, Steneto, Stara Reka, Dzhendema, Northern Dzhendem, Peeshti Skali, and Sokolna(see map 2) – with a total area of 20,019.6 ha. Eight of the reserves (excluding Kozia Stena), and the Park as a whole are included in the *UN List of National Parks and Protected Areas*. The park was declared by BirdLife International as an important bird area of global significance.

The reserves Boatin, Carichina, Steneto and the Dzhendema are declared as biosphere reserves under UNESCO's Man and Biosphere Programme. Boatin, Carichina and Dzhendema have been designated for over 50 years.The percentage of park territory with reserve status is about 28% (Figure 3). (3)

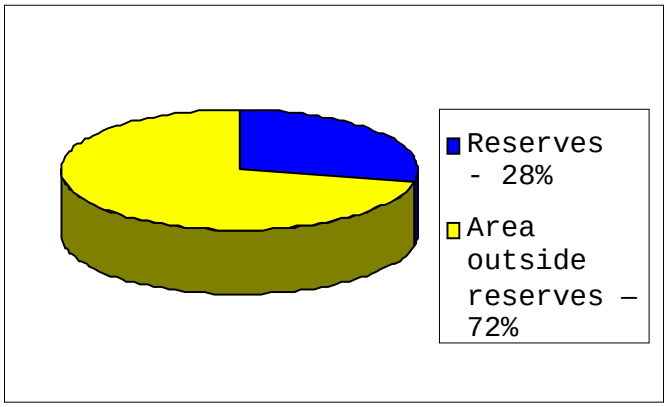


Figure 3. Ratio of the Area of Nature Reserves to the Entire Area of the National Park

5.2. Physical geography of the park

5.2.1. Geology and geomorphology

The most significant morphological structures of Bulgaria (the Moesian table, the Balkanides, the Rhodopide morphostructure), were formed during the Neocene and Quaternary periods.

The Balkanides - the largest, most recent geological formation occurred alongside the development of the Alps and Himalayan mountain systems. This system is represented in Bulgaria by three longitudinal parts: Pre-Balkan, Stara Mountain chain and Srednogorie areas.

The Park area is made of magma plutonic bodies, sediment, and metamorphous rocks of the Palaeozoic, Mesozoic, and Palaeogene age.

As a result, the Central Balkan has a complex geological history and structure. Four denudation levels are observed in the Park with richly diverse geomorphologic elements. These include flattened ridges, sloping steps, sloping declivities, granite over-thrusts, and well expressed surface and underground limestone (karst) forms. There are deep canyons, individual rocks and rock walls, deep precipices and water caves in the Park.

The Balkan Mountain chain forms an arc widely opened to the North and Northeast, and represents a complex natural and geographic boundary between Northern and Southern Bulgaria. The chain is West-East in orientation, caused by its links to the tectonic shifts associated with the formation of the Alps and Himalayas. Tectonic pressure from the South caused the mountain folds to incline to the North.

Granite overthrust masses in the highest ridge parts – from Levski peak (Ambaritsa), through Botev peak, to Triglav peak – form an enormous tectonic

klippe, approximately 30 km long, called the Botev Peak overthrust. The klippe is deeply denuded and is of varying width, several hundred meters at Levski peak to 10 km in the Kalofer area.

Approximately one quarter of the forested area of the Park is on granite rock, spreading mainly to the areas of Cherni Vit, Ribaritsa, Klisura and Sahrane villages. Next in distribution is the crystalline schist. These occur mainly in the area of Karlovo. Third is sandstone, mainly in the areas of Apriltsi, Rositsa and Sahrane. Others, less well presented, are the clay schist (Ribaritsa, Cherni Osam), the South-Bulgarian granite (Karlovo, Pirdop), the granodiorite, (Rozino) and the dolomite (around Cherni Osam, Rozino). Others include granite gneiss, marl, lime, and quartz porphyry.

The Balkan Mountain karst covers a small area of the Park. Steneto reserve is the area of the Cherni Osam river canyon and includes deep precipices and precipice caves, including Bulgaria's deepest cave, the Raichova Dupka, 377 m deep. Next come the Malkata Yama, 232 m deep, Borova Dupka, 168 m deep, and the Pticha Dupka, 108 m deep.

All of these elements come together to offer a landscape of highly aesthetic value and tremendous variety in a relatively small area. The geology and elevation of the Park combine to offer excellent vistas, long-distance views, wide panoramas, and relatively quick access from the North and South. (3)

5.2.2. Climate

According to Bulgaria's climatic zones, the Central Balkan National Park lies in three main climatic areas: mountain, moderate continental and transitory.

The ***mountain climate zone*** is higher than 1,000 m above sea level. The Balkan mountain chain is the main climatic barrier in Bulgaria. Its Northern foothills experience a moderate continental climate, while its Southern parts are characterized by transitory conditions.

The climate elements vary significantly in the park with its higher elevations, slopes, exposure of slopes, and the significantly indented terrain. The average annual temperatures are among the lowest in the country, and the annual, average precipitation is among the highest.

The average annual temperature is 7℃. The temperature decreases at higher elevations and at altitudes between 1,000 and 2,000 m reaches 1.5℃, and at 2,000–
2,370 m above sea level it measures between 1.5℃ and 0.5℃.

The average January temperature varies between -9° and -3℃ and is lowest on Botev peak (-9.3℃). The average temperature in July varies between 7.4℃ and 16.5℃.

Precipitation increases with height and usually reaches 1,200 mm/year, and is more abundant on the Northern slopes. The highest precipitation levels of 1,300 mm/year were measured in the Park (Ambaritsa chalet). The Southern slopes feature less precipitation, at an average of 550 mm/year. The maximum level of precipitation is in June and the lowest in February. Winter precipitation is mainly snow. The snow cover remains for approximately 6 months. Avalanches are a frequent occurrence, most often in the range between 1,500 and 2,200 m above sea level, mainly in the treeless zone. The Mountain Climate zone is characterized by frequent and strong winds. This is particularly true along the slopes and peaks where the average annual wind speed reaches 10 m/sec. The Northern foothills of the Central Balkan experience uncharacteristically warm spring winds sweeping in from the South (*foehn*), while turbulent boreal winds can occur along the Southern slopes.

The ***moderate continental climate zone*** covers the lower Northern slopes of the park. The average January temperatures are low (-3.5 to 1.5℃), and the average July temperatures are comparatively high (16.5-22℃). The average annual precipitation varies between 680 and 1,000 mm. The maximum precipitation level is in summer (June) and the minimum is in winter (February). Late spring and early fall can be characterised by frosts and frequent temperature fluctuations.

The ***transitory climatic zone*** covers the lower parts of the Northern slopes and the entire Southern slopes of the Park. The average January temperatures are -2.5 to -1℃, and the average for July is 17 to 21℃. The average annual precipitation in this zone is 700-900 mm.

These three climatic regions are among the most significant causes for the presence of natural elements and communities typical of other geographic zones. There are significant differences between the climate belts, which are accentuated by the differences in elevation and the complex terrain over a relatively small area. These factors contribute significantly to the exceptionally high biological diversity of the Central Balkan National Park.

There is pronounced vertical zoning of climate in the National Park. There is also general drying of the area, possibly linked to global warming.

The average annual amount of sunshine hours in the Park is 1,848 h. The relative sunshine duration on Botev peak is highest in August, at 56% and lowest in May and December, at 33%.

Permanent retention of snow in the park is observed during the first ten-day period in November along the Northern slopes, and during the third ten-day period of the same month, for the Southern slopes. The snow depth during the second and third ten-day period of February reaches 40-60 cm at 1,100-1,200 m above sea level and 150 to 200 cm at altitudes above 2,000 m. The snow cover in the lower parts stays for 75-80 days with more than 150-180 days in the higher parts. The maximum snow cover occurs in March. Individual snow drifts remain throughout the year (mainly around the massif of Botev peak).

The frequency of fog increases at higher altitudes but is strongly affected by terrain and microclimates. The maximum number of days with fog occurs in May

and June. It coincides with the maximum level of relative humidity. At altitudes between 2,000 and 2,300 m, the maximum of cases with fog is in January and February, and secondary maximum levels occur in May-June.

Annually, North-Western and Western-North-Western winds prevail on the Northern slopes of the park. The Southern slope is influenced most by winds from North and North-Northwest. The prevalent strong winds (speed higher than 14 m/s) are from Northwest and West-Northwest on the Northern slope and West and Southwest on the Southern slope. The average wind speed on peak Botev during the winter reaches the country's highest values. Boreal winds are frequent along the Northern slope with a prevalent transfer of air masses from the South (foehn winds). During the cold period of the year these winds are warm, and dry in the summer. Typical of the Southern slope are the 'falling' cold winds occurring during the winter months (November-February). (3)

5.3. Biotic characteristic

5.3.1. Vegetation and forests

Six vegetation belts exist entirely or are represented partially in Central Balkan National Park. These include xerothermic oak forests, xeromesophyllic and mesophyllic oak and hornbeam forests, a beech belt, a coniferous belt, a sub-alpine open woodland belt of dwarf pine and juniper brush (sub-alpine belt), and alpine belt.

With regard to phyto-geography, the park area is included in the Central Balkan District of the Ilyrian Province, of the European Deciduous Forest Area.

Forests of natural origin in the National Park are approximately 97%. The average age of forests in Central Balkan National Park is 111 years. The average age of the deciduous forests is 121 years, and of the coniferous – 95 (with the average age of forests in Bulgaria being approximately 45). The lower average age of the coniferous forests is explained by the presence of coniferous plantations, the predominant use of coniferous timber in the past and by the high vulnerability of the coniferous forests by unfavourable factors – mainly fire, heavy snow etc.

Beech forests in the park together with the adjacent tree massifs spread at about 30 000 ha and comprise the widest and most solid uninfluenced of man's activity beech forests in Europe. There are presented 6 vegetation zones – Xeroterm oak-tree forests, xeromesophyl and mesophyl oak-tree and yoke-elm forests, coniferous zone, sub-alpine thin forests, dwarf pine and juniper shrubbery (sub-alpine zone) and alpine zone. Beech ecosystems take 28,522 ha of the territory of the park with average age – 135 years.

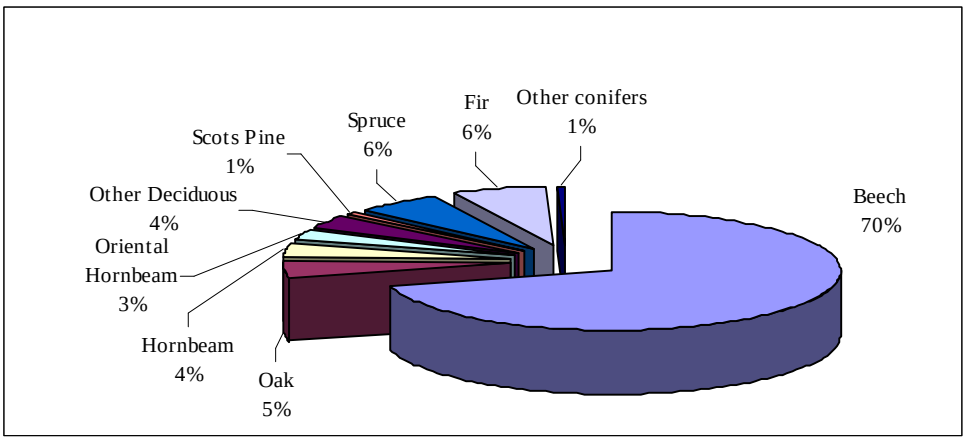


Figure 4. Distribution of Tree Species in the Area

2337 species and subspecies are recorded in the park – 1900 supreme plants, 188 duckweed, 229 species of moss, 15 ferns, 1 club moss and lesser club moss species, and 3 horsetail species(*Equisetum*). This represents more than 50% of Bulgaria's diversity of these species (figure 4).

The Park contains a group of taxons of high conservation value. It includes legally protected, local, Bulgarian and Balkan endemic species, the species in Bulgaria's Red Data Book, the European Red List, and the IUCN List of Endangered Species.

Plants of significance for conservation are as follows: local endemic species (10), Bulgarian endemic species (10), Balkan endemic species (67), species protected under Bulgarian legislation (30), species included in Bulgaria's Red Data Book (81), species from European Red List (9), globally endangered species according to IUCN (10).Of the taxons of certain value and deficiency, particular attention is paid to the following species:

Anemone *(Anemone narsissiflora)*
Bear sanicle *(Cortusa matthioli)*
Sundew *(Drosera rotundifolia)*
Snowdrop *(Galanthus nivalis)*
Yellow gentian *(Gentiana lutea)*
Dotted-flowered gentian *(Gentiana punctata)*
Lion's paw *(Leontopodium alpinum)*
Mountain lily *(Lilium jankae)*
Balkan butterwort *(Pinguicula balcanica)*
Stara Planina primrose *(Primula frondosa)*
Rose-root *(Rhodiola rosea)*
Myrtle leaf *(Rhododendron myrtifolium)*
Rhynochocorys *(Rhynchocorys elephas)*
Sempervivum *(Sempervivum erythraeum)*
Mountain lily *(Lilium jankae)*
Globe flower *(Trollius europaeus)*

A total of 166 medicinal plant species have been established in Central Balkan National Park. Their total number represents 75% of the species widely used in official and traditional medicine. Of those one species is representative of lower plants, and the remaining 165 species are of higher plants. Most numerous are the families *Asteraceae* (19 species), *Rosaceae* (18 species), *Lamiaceae* (13 species) *Liliaceae* (7 species) and *Scrophulariaceae* (6 species). (3)

5.3.2. Fauna

On the territory of the park there are 2 300 invertebrate species registered, of which 261 are rare, 168 endemic, 108 relicts, 36 species are included in the world and European lists of threatened species.

From the vertebrates, 211 species are recorded on the territory of the park – 6 species of fish, 8 species of amphibians, 14 species of reptiles, 123 species of nesting birds, 60 species of mammals.

- Eight species of mammals have populations of world significance in the park: snow vole (*Microtus nivalis*), European souslik (*Citellus citillus*), Lesser mole rat (*Spalax leucodon*), Bechstein's bat (*Myotis bechsteni*), wild cat (*Felis silvestris*), Forest dormouse (*Dryomys nitedula*), Common dormouse (Muscardinus avellanarius) , Balkan Chamois (Rupikapra rupikapra balkanika)
- Populations of European significance – 13 species.
- Populations of national significance – 8 species of mammals, among which are Long-eared bat (*Plecotus auritus*), Common red-backed vole (*Clethrionomys glareolus*), Pine marten (*Martes martes*), Roe deer (*Capreolus capreolus*)

Because of its ornithofauna the park is declared as Important Bird Area of international significance. Five species have world significant populations here. These are Semi-collared flycatcher (*Ficedulla albicollis*), Ring ouzel (*Turdus torquatus*), Alpine Accentor *(Prunella collaris)*, Shorelark (*Eremophila alpestris balcanica)* and White-backed woodpecker (*Dendrocopos leucotos*). Twenty five bird species among which are Short-toed eagle (*Circaetus gallicus*), Long-legged buzzard (*Buteo rufinus*), Golden eagle (*Aquila chrysaetos*), Eagle owl (*Bubo bubo*), Grey-headed woodpecker (*Picus canus*), have populations of European significance in the park. (3)

5.4. Food availability

5.4.1 Livestock

The high mountain treeless zone of Central Balkan was an object of anthropogenic impact during more than 500 years. On the ridges of Central Balkan Mountain on the territory of the present park, about 120 000 sheep, 12000 – 15000 cattle and 2500 – 3000 horses were grazing yearly (data for the middle of the twentieth century, photos 10,11). During that period the ridges were kept "open and clean" through cutting and burning down the Siberian juniper communities. Over the past 40 – 50 years, due to the socio–economic situation the number of livestock in the high mountain park zone has decreased as can be concluded from the tables below (tables 1, 2, 3, 4), which represents current trends in the Park. It also reflects the tendencies in the whole country.

Each year shepherds take the flocks up in the mountain to the open treeless zone. Herds consist of animals belonging to different owners who live in the villages in the nearby territory surrounding the national park. This process starts usually about the beginning of May, when the snow cover in the highlands melts. At first shepherds take the livestock to the lower parts of the mountain that are out of the park's boundaries. Herds remain in the high-mountainous pastures until late September. There are sheep-pens for stock and shelters for the shepherds there.

Photos 10, 11. Cows and semi - wild horses grazing on the high-mountain pastures of Tazha section.

The maximum possible number of the domestic animals is set up each year in an annual *Grazing plan* prepared by the Directorate in accordance with the Protected Areas Act and the norms and regimes given in the 10-year Management plan of the Park.

Grazing is organized on the basis of the annual system of permits issued by park rangers. Permits are issued on a yearly basis and are in the name of the herdsmen. Herdsmen go to the respective park office and pay a state fee (the National Park territory is exclusive state property). The collected fee/per capita are transferred to the state budget. Some of the villages do not have any free land suitable for common pasture and their only option is grazing the livestock in the national park.

Table 1. Park areas allowed for grazing and grazing regimes (2001 Park grazing plan)(3)

Grazing region	Area for grazing of sheep (ha)	Number of sheep for the entire area	Area for grazing of cows (ha)	Number of cows for the entire area	Number of horses for the entire area
Sinanitsa	174	348	60	64	10
Selska river	381	762	240	226	20
Triglav	230	460	240	226	20
Karaburun	213	426	-	-	15
Tazha chalet	536	1072	245	230	40
Peak Botev	358	716	88.3	89	30
Ravnets	1299	2598	150	145	100
Topalitsa	433	866	50	55	40
Ambaritsa	454	908	100	100	30
Pladnishteto	781	1562	198	188	20
Kozia Stena	284	568	168	161	-
Vetroviti Preslap	174	348	75	77	-
Bulovanya	1173	235	326	303	50
Planinski Izvori	276	552	22	30	16
Under special control					
Tazha chalet	42	84	-	-	-
Trite Izvora	90	180	-	-	-
Orlovo shelter	237	474	-	-	-
Total for all regions	**7135**	**12159**	**1962.3**	**1894**	**391**

Table 2. Registered livestock by municipalities (2001), (3)

No	Municipality	Bovine & buffalo	Sheep	Goats	Equine
1.	Gabrovo	1328	14681	5232	406
2.	Sevlievo	8921	34033	7851	1826
3.	Apriltsi	543	6617	1024	131
4.	Teteven	2241	16075	5877	244
5.	Troyan	5816	19773	4731	958
6.	Karlovo	6330	27075	10035	2575
7.	Pirdop	1043	2960	1246	114
8.	Pavel Banya	2849	11300	5048	-
9.	Anton	443	1060	731	64
	TOTAL:	**29514**	**133574**	**41775**	**6318**

Table 3. Registered livestock by municipalities (2003)

No	Municipality	bovine & buffalo	Sheep	Goats	Equine	Pigs
1.	Gabrovo	2153	5218	5090	338	4558
2.	Sevlievo	6150	9278	6828	1232	5526
3.	Apriltsi	591	2751	808	242	1845
4.	Teteven	2264	10661	5478	778	2043
5.	Troyan	5412	9129	4196	884	8618
6.	Karlovo	7235	20270	7965	3625	4121
7.	Pirdop	728	1137	1012	326	955
8.	Pavel Banya	2972	4971	3925	1295	1121
9.	Anton	515	615	571	218	454
	TOTAL:	28320	64031	35873	8938	29241

Table 4. Livestock numbers grazing in the park during the summer and their trend for 2001– 2005

	Cows – number per year					Sheep – number per year					Horses – number per year				
	01	**02**	**03**	**04**	**05**	**01**	**02**	**03**	**04**	**05**	**01**	**02**	**03**	**04**	**05**
Total	**1476**	**1270**	**1454**	**1115**	**799**	**4286**	**3033**	**3406**	**2725**	**2910**	**475**	**335**	**257**	**252**	**238**

Note: The annual mortality rate in the park is not well known, probably ranging around 2-3%, with the main factors being thunderstorm lightning (photo 12) and attacks of Brown Bears and Wolves.

In order to preserve the high-mountain treeless habitat and the traditional way of grazing the NP Directorate has developed a project “Initial recovering actions for the management of high-mountain treeless zone habitats through setting up and maintaining pasture areas” and applied for funding to the National Trust Eco Fund. The project envisages the building up of infrastructure, accommodation, sheds and watering places for high-mountain stock–breeding. This will stimulate the local people to use the treeless zone for pasture of livestock and will help maintain the habitats in the zone. Moreover, this is expected to contribute to the successful reintroduction project and to the self-sustenance of the vulture population, i.e. reducing its full dependence on artificial feeding.

Photo 12. Each season thunderstorms kill livestock on the high mountain pastures of Central Balkan NP and makes it available for vultures.

5.4.2. Wildlife species

The following table (table 5) and the notes present information about the wildlife that could in the park that could take part in the natural vulture diet.

Table 5. Wildlife species in the park, which present potential natural food resource for the vultures (2005),(3)

Species	Red Deer				Roe Deer			
Park Section	males	fe-males	off-springs	Total Red Deer	males	fe-males	off-springs	Total Red Deer
PS Teteven	22	30	14	66	78	100	50	228
PS Troyan	15	35	15	65	34	40	25	99
PS Stoikite	36	53	20	109	55	70	50	175
PS Tazha	21	58	18	97	25	49	19	93
PS Kalofer	6	9	2	17	13	17	8	38
PS Karlovo	3	4	2	9	10	4	3	17
PS Klisura	3	5	4	12	8	11	7	26
Total	**106**	**194**	**75**	**375**	**223**	**291**	**162**	**676**
Species	**Chamois**				**Wild Boar**			
Park Section	males	fe-males	off-springs	Total Chamois	males	fe-males	off-springs	Total Wild Boar
PS Teteven	-	-	-	-	40	62	92	194
PS Troyan	1	1	1	3	42	64	80	186
PS Stoikite	15	17	8	40	32	45	80	157
PS Tazha	13	27	17	57	34	67	98	199
PS Kalofer	13	56	20	89	15	17	20	52
PS Karlovo	2	4	-	6	8	21	35	64
PS Klisura	4	7	5	16	6	15	28.	49
Total	**48**	**112**	**51**	**211**	**177**	**291**	**433**	**901**

The Park Directorate undertakes some supporting measures, and provides corn and salt at certain places throughout all park sections, thus trying to attract the species and keep them within the park territory.

Red deer – in general the status of the species in the country is not very good. On that background the park preserves comparatively good population of the species. Its status is better in the Eastern part of the Park – PS Tazha and PS Stoikite. However, due to the improved environment the population of the species is expected to continue to grow in the future.

Chamois – The whole Balkan Mountain population is concentrated on the territory of Central Balkan. After the political changes in 1989, a stronger anthropogenic pressure on the chamois – illegal shooting - took place. That brought about a decrease in its number in the years to come. Since 1999 when the Park Directorate was founded, and the protection of the park territory was organized, paying special attention on the main habitats of the species. That led to stabilization of the status of the chamois in the park. Proof of this is observed also in the figures coming out from the annual monitoring of the species, which takes place every autumn and spring (photo 13).

Roe deer - the status of the species in the Park is stable.

Wild boar – Over the last few years the species has increased its numbers in Bulgaria. The observation of this trend is also valid for the park area. (3)

Photo 13. The high – mountain combined with inaccessible cliffs are perfect habitat for the chamois in Tazha park section and the entire park. For some 5 years ago the population - once a prime target for the poachers is increasing gradually. A national action plan for the conservation of the Balkan chamois is under development at the moment.

5.5. Hunting activities

The hunting on the territory of the park is prohibited. As the Tazha section lies in the SE part of the Park, there are some hunting activities South of the area. This territory consists of agriculture land and meadows; hence the main species hunted here are brown hares and pheasants, which cannot be a real food source. However, the Eastern edge and part of the North side of the Park is surrounded by 3 Game State Reserves, i.e. hunting stations. These 3 hunting stations have quite good populations of Red Deed, Roe Deer and Wild Boar because of the supplementary feeding. Hunting here is only professional, i.e. paid, and other hunters are not permitted to hunt here. This is positive as these hunting stations thus play the role of a buffer zone of the Park, limiting hunting even out of its borders. Still, these hunting station go along with certain negative sides (please see *Threats*). As hunting here is professional, there are no dead animals left after the hunting. However, these territories also keep a high number of wolves and bears. Wolves often kill animals there. In some occasions when there are prey remains left. The rangers from the station, whom BPPS team knows in person, inform that Golden eagles often feed on the leftovers. This is also an option for the vultures with benefits and shortcomings.

5.6. Other carcass feeding species in the area

Golden Eagle – the territory of the park is inhabited by about 19 Golden eagle pairs. In Tazha section, where reintroduction is envisaged, 3 pairs are resident. The park preserves about 9% of the Bulgarian population of this rare European raptor (photo 14).

Imperial Eagle– single birds are rarely observed on the territory of the park, sometimes in Tazha section. The territories of two breeding pairs are located close to the park boundaries and the birds enter the NP in search of food.

Raven – the species population in the park is good. In Tazha section there are about 10 pairs.

Wolf – there are few pairs in Tazha section, which form one pack of about 10 to 15 wolves during winter. Within and around the territory of the park whole there are about 100 wolves.

Brown Bear – there are about 80 bears in the whole park and about 14-16 in Tazha section.

Foxes – a numerous population exists on the park territory.

Photo 14. Juvenile Golden eagle, Tazha park section.

5.7. Suitable habitats for reintroduction

With the vast open hilly mountain pastures on its ridge Central Balkan NP provides the ideal foraging ground for large raptors. Numerous gorges and many separate cliffs across the mountain offer good nesting conditions for Griffon Vultures.

Photo 15. Sokolna reserve, Tazha park section. The abundance of precipices in the park answers the need of nesting niches, caves and platforms. Birds can roost undisturbed at remote rocks. Hundred years ago these habitats were populous with eagles, falcons and vultures.

5.8. Socio-economic situation in the region

5.8.1. Territorial context

Central Balkan National Park and the adjacent areas lie in five administrative areas: Lovech, Gabrovo, Stara Zagora, Plovdiv; and nine municipalities: Teteven, Troyan, Apriltsi, Sevlievo, Pavel Banya, Karlovo, Anton, and Pirdop.

The conservation of the park and its unique biological diversity are inevitably linked to the area in direct proximity to the park boundaries.

The area around the park is approximately 5,640 km^2, and surrounds the park on all sides 25 km from its boundaries. Geo-physically, this area is important for the Park and thus for its administration and management. In return, the Park administration recognises a reciprocal responsibility to agencies and local communities whose activities have direct bearings on the purpose and objectives of the park. (3)

5.8.2. Demographic trends and uses in areas around the park

The total population of the nine municipalities around the national park amounts to 297,018 persons, representing only 2.8% of Bulgaria's population. The population in areas around the park is approximately 130,000. The population below working age is less than the country's average at 16.8% (18.1% for the country), while the population of working age is 56% (57.3% for the country). The percentage of the population above retirement age is higher – 27.2% (24.6% for the country). These indicators differ widely in different municipalities, the Gabrovo municipality, for example, having the highest percentage of population of working age – 60.2%.

The Northern towns of Apriltsi, Troyan and Gabrovo also have very low populations of young people—11.9%, 14.7% and 14.6% respectively. The highest relative share of the adult population (of retirement age) is also located in the North and includes the municipalities of Apriltsi – 43.7%, Sevlievo – 33.4% and Troyan – 30.2%.(3)

5.8.3. Employment trends

Those persons employed in government, municipal and co-operative enterprises in these regions are involved mainly in the industrial sector with 60.9% of them in the governmental sector (compared to 39.1% for the country). The highest share of those in the governmental sector is that of the municipalities of Karlovo – 73.9%, Pirdop – 64.6% and Troyan – 62.9%. Those employed by private companies are involved mostly in the industrial sector – 67% (38.8% for the country).

The private sector accounts for more than 70% of the industrial work force in the areas to the North of the park (Sevlievo, Gabrovo, Apriltsi municipalities having the highest rates). The Education Sector (9.7%), Healthcare, Social Welfare and Athletics (8.8%), and the private sector of Commerce and Deliveries (14.4%)

come next after the largest employers from the industrial sectors. Only 4.1% of the government officials and 1.9% of private company employees are involved in forestry.

Pavel Banya and Teteven Areas are with highest unemployment rates, with unemployment among the population of working age 18.0% and 13.7%, respectively. A clear trend of increased unemployment in the municipalities South of the Park was observed during the 1998-2000 period. The lowest unemployment levels are in the municipalities of Sevlievo and Pirdop.(#)

5.8.4. Population trends in Pavel Banya Municipality

The total number of people born in the municipality of Pavel Banya, which includes Tazha park section and its surrounding village area) shows a certain trend of decrease. At the same time the number of mortality rate keeps at a certain constant level with a slight drift to increase. The mortality rate as a whole is bigger than the birth rate. In this respect the negative natural growth of population is reasonable. The territorial differences in the natural growth of population are influenced mainly by its ethnic content. The villages where the Turkish and Roma ethnic groups are bigger, the quotient of natural increase of the population is more favorable.

The mechanical movement in general does not create prerequisites for compensation of the unfavourable natural growth. The number of people who have left the municipalities to a greater extent coincides with that of those who came to live there. For the 9-year period the average amount of people who came to inhabit the region are 400-450, and those who migrated out of it are 440-460.(3)

5.8.5. Employment in Pavel Banya Municipality

The labor potential in the municipality in general is formed by the segment of the population which is in the limits of working age. The labour force, however, does not coincide with the former one. So, there is a need to introduce the indicator of *“active population”*. The number of actively working population is as follows:

- Working population – 8691
- Active population - 7278
- Occupied – 2917
- Hired, having a labour contract – 2466 people

As a whole the active population in the municipality is 44.1% of all citizens. The hired people (having full labor contract) are 84.3% of all the occupied people. The difference is due to the number of free-lancers, who are with the highest relative

share in agriculture and trade. Regardless of the still dominating number of people in the state sector, there is a stable trend for asserting a more important role of the private sector on the labor market.

The second important aspect in the evaluation of the population as a labour resource is related to unemployment. The unemployment rate in Pavel Banya municipality varies in certain boundaries, but all in all it keeps a comparatively high level.

The main reason for the abrupt increase of unemployment in the municipality is due to the consequences of the structural reform of the real economic sector. The reforms, which take place in the social sphere, also lead to increase in the unemployed people. (3)

5.8.6. Tourism

Created and certified by PAN Parks Foundation, the Strategy for Sustainable Tourism Development in the Region of Central Balkan National Park is developed under the initiative and with the support of the park directorate with public participation of all parties concerned.

It outlines the following strategic objectives:

- ⇒ Development of tourism, based on the principles of preserving the natural and cultural resources in their natural landscape.
- ⇒ Asserting Central Balkan on both Bulgarian and international markets as a competitive destination for “green” tourism
- ⇒ Creating more opportunities for the local people through tourism – developing small family tourist enterprises, traditional crafts, opening of new working places.

In the process of strategy development, a network of partners has been created. Led by mutual interest, the parties concerned, i.e. local tourist businesses, the municipal authorities, the regional and local tourist unions and the park directorate created a mutual PAN Parks working group. It is the forum, which created the PAN Parks standards for certifying 3 types of tourist services, i.e. accommodation and food; tours and attractions; as well as a certification procedure. The first 12 business partners of the park directorate and PAN parks are certified – 8 of them offer accommodation services and 4 – attraction.

A Management Plan for the visitors in the Central Balkan has been worked out.

Its main purposes are:

- ⇒ formal adoption of the sites for tourism development in the park, ultimately aimed at achieving the main objectives of the park;
- ⇒ Creating of a draft document which will direct the efforts of the NP Directorate and other parties concerned in offering attractions for visitors of the park.

⇒ Support for the determination of the trends for maintaining the existing and developing new visitor infrastructure.

⇒ Further development and making detailed of the zone for tourism and introducing the receiving capacity of the boundary of the allowed change, as indexes and for loading and impact of the visitors in the places and regions designated for development of tourism in NP.

In 2004 the Park Directorate conducted a socio-economic research “Central Balkan National Park: Reality and Future Opportunities”. It analyses the region of the park, its visitors and the areas around it.

After the research:

1. In 2004, 57% of the people resting around NPCB have visited the park; 30% plan to do it by the end of their stay; whereas in 1998, 74% claim the presence of NPCB has influenced their decision to visit the region.
2. More than 2/3 of the people resting in the region of Central Balkan have expressed satisfaction with:

- the places for rest and picnic
- the lack of trash
- the well-organised information on the routes and natural landmarks.

3. Positive development of the tourism in the region of NPCB

- 39% of the inquired people state that the number of tourists increases

- the relative share of the people who deal with tourism around the park has increased 7 times since 1998. (3)

5.9. Threats

5.9.1. Humanisation of the territory

The total number of the tourists in the park is about 45000 visitors annually. The Park is visited mainly in the summer months of June, July and August. Large events in the Park can only be organised in strict compliance with established ground rules and conditions, and only with the express permission of the Park Directorate. The Park allows outings of limited duration: longer (several days), one day, and short (several hours). Accommodation is available at the chalets, lodges, Bed & Breakfast (B&B), and recreational facilities. In the Central Balkan National Park territory, there are a total of 20 tourist chalets with a combined capacity of 1,434 beds, all operated by the Bulgarian Tourism Union. In addition, there are four recreational facilities owned and operated by commercial corporations or institutions with a total of 264 beds, and three tourist lodges with 40 beds. The latter offer only basic accommodation but can be used in inclement weather. Motor vehicle traffic within the Park territory is also regulated. In Tazha section there are 3 mountain chalets and one recreational facility owned by the

Ministry of Interior. The section, from its Southern part, is surrounded by four villages, with a total number of inhabitants around 4 000.

The data concerning the gathering of natural products - medicinal plants, fruits, herbs, condiments, mushrooms, snails etc. is taken mainly from the representative sociological study of the population from municipal areas within 25-30 km around the Park. It is estimated that 69,000 persons (53% of the population from the area around the Park), use the natural resources found in the Stara Planina area. Many of these individuals, however, do not collect products for personal use in the Park.

Many of the natural products are used by people from settlements further than 25-30 km around the Park. It may be assumed with a large degree of certainty that the surrounding population gathers both around and partially within the Park approximately 187 tons of forest fruit, 218 tons of herbs, 77 tons of condiments, 229 tons of snails, and 924 tons of mushrooms each year. The figures represent average annual values.

The people who gather wild products for commercial purposes are in most cases from urban centres where buy-out points exist. The number of people gathering natural products for sale may not be determined accurately, but through admissible statistical extrapolation it may be assumed as many as 10,000 people from a total of 130,000. It is still not certain exactly how many enter the Park to gather natural resources.

There is increasing exploitation of these resources due to national and foreign market interests in wild products. Bulgarian wild produce prices are generally among the lowest in Europe, and many non-timber natural resources are harvested for short-term gain, rather than long-term management.

During the socio-economic studies, the respondents indicated regions and locations where they gather non-timber forest products. These were then outlined on a map during the drafting of this Management Plan. The data show that herbs and mushrooms are also gathered in five of the nine reserves in the Park.

Our opinion is that despite a bit extensive in some periods, humanisation of the territory is not a real threat for the reintroduction. It is so, as bigger groups of people occur in the park only for a short period between July and September, and they are concentrated in certain areas.

5.9.2. Habitat destruction

This threat does not exist on the territory of the park. The territory of the park has the highest degree of law protection and any habitat destruction within its borders is virtually impossible. On the North-western edge of the park there are some ideas to develop a ski resort which might affect the park territories. However this is very unlikely to happen as this is not possible in the park territory. On the other hand, it is most probably just an idea, with no serious grounds behind it. It has become a kind of fashion recently that every Bulgarian mayor, whose town

borders with a mountain, dreams of turning it into a world famous ski resort, which, of course, is not possible.

Outside the park, there are some clear cuttings. There is an open copper mine exploited for the last 30 years approximately 20 km west of the Western edge of the park.

5.9.3. Electric power lines

The only power line in the park is located in Tazha park section. It powers a a water station, situated deep in the Tazha river gorge. The power lines are with the lowest voltage (to supply the pumps with electricity). They are running mostly deep in the gorge in a thick brush but at one point they climb a small ridge and get exposed at height of 6m and length of about 300m. These are old wooden pylons already in a poor condition with high chance to fall down, hopefully the pylon is left to stick up more than a meter above the wires which makes it safe at least for perching. However, we consider as priority either to secure the wires and improve their visibility or to convince the electric company to put this 300m segment underground.

South of the park, and South of Tazha section there is one medium voltage power line. It is at much lower altitude – 600 m a.s.l. and is about 8 km away from the area were reintroduction is envisaged. According to the experience shared with our colleagues from South Africa and Hungary these power lines do not pose a threat for birds of prey. However, further investigation is needed to specify exactly how dangerous they are and what the solution would be, if needed.

5.9.4. Forest fires

There were few local forest fires in artificial reforested pine forests outside of the park in the last years. Even thought the park has huge forest in case of fire the vultures will not get affected directly.

5.9.5. Lack of food resources

Having in mind the population size of the wild ungulates and the management of the domestic animals, it is clear that they cannot provide enough natural food for the vultures in the moment. In December 2006 within a joint project of CBNP Directorate and BPPS a vulture feeding place was constructed in Tazha park section. After we introduced the idea to the neighbouring villages we received plenty of calls and provided a rich “meal” for a short time. The big villages of Kazanlak valley proved in practice its big capacity to supply the feeding place. Thus we will significantly compensate the lack of natural food until the region regenerate its own natural capacity . For the mid-term and long-term future there are positive signals that the natural food for the vultures will be improving considerably. On one hand, there is the constantly growing population of the wild ungulates in the park. We also expect that with the new membership of Bulgaria

in the EU, there are real possibilities that free grazing of livestock will be supported and thus made profitable. For that reason we consider that their livestock numbers in the park will start to increase. The new BPPS project for establishing a traditional kept herd on the Central Balkan mountain pastures which started in 2005 will be another source of food for the vultures. The main purpose of the herd is to compensate wolf and bear damages on livestock. The killed livestock will be confiscated an provided on the feeding place.

5.9.5. Poisoning

5.9.5.1. Illegal use of poisoned baits

As mentioned above, hunting on the park territory is forbidden and strictly controlled. 44 rangers guard the park territory and its regime. It could be stated that this danger does not exist here. Also it is unlikely that the hunters and the farmers in the villages use poisoned baits. No such cases were registered by BPPS. The local people confirmed that this practice is not used over the last 20 years. However, this is a real threat in the hunting stations which surround the park. These are: Game State Reserve “Rusalka” on the North, Game State Reserve “Rositza” on North-east, and Game State Reserve “Mazalat” on the Eastern end of the park. BPPS team has very good personal contact with the management and the rangers of “Rusalka” and “Mazalat” Game State Reserves. In our discussions, the rangers from these stations claim that they have not used poisoned baits for the last 20 years. In the past these stations used to be united in one big hunting station, which also partly occupied the territory of the park. The main trophy species were the Brown Bear, the Red Dear and the Wild Boar. Additionally, in this period the wolf population in Bulgaria was not more than 150 specimens. That is why it stands to reason why there was no such practice here. However, may be this has been possible over the last years (after 2002), since the bear is not a hunting object anymore. On the other hand, wolves definitely cause some “damages” for the hunters and the local livestock owners and it is possible that they use poison, trying to exterminate the wolves.

In December 2005 this was confirmed by a very bad poisoning accident near the Southwest edge of the park. A horse carcass, killed by wolves was treated with poison, most probably by the owner of the horse. The relevant institution were alarmed, but unfortunately by that time two juvenile Golden eagles, two ravens and two foxes got poisoned. Samples were taken by the experts of the Regional Inspectorate of Environment and Water and the Fund for the Wild Flora and Fauna. At the moment there is investigating procedure underway in order to find the culprit.

This case is a real proof that the danger of poison use should not be underestimated and efforts have to be made in this direction constantly. BPPS is now in preparation of special leaflet aimed at livestock breeders around the park on the issues of poison use.

In 2006 the new BPPS project for compensation of wolf and bear kills has started. It's main goal is to prevent the use of poisoning baits in the region of CBNP and thus to assure harmless environment for future vulture colony in the park.

5.9.5.2. Lead poisoning

This problem is not well studied in Bulgaria. During the last year BPPS prepared a special project devoted on studying the real situation around four big wetlands where there is strong hunting pressure. It involved actions on start-up of an information campaign for the authorities, the hunters and the public. Unfortunately, up to now we could not succeed in finding the funds needed for its implementation. Hence, it could be stated that this threat cannot be ignored at all. However, the chance of lead poisoning is relatively small, because the hunting which goes in the area around Tazha section has as main target the Brown Hare, the Fox and some bird species, which are usually 100% harvested by the hunters. If not they die in hidden places, inaccessible for the vultures.

5.9.6. Shooting

Together with poisoning, this is the biggest threat for the vultures in general. However, it does not exist on the territory of the park, which we consider a big advantage. There are some isolated cases of poaching around the borders of the park or may be on the edge of the park, but these occur at night and they are really focused on big game species, such as Red Deer, Roe Deer and Wild Boar. Additionally, the territories South of Tazha section are mainly flat agriculture fields, followed by the forest hills of Sredna Gora mountain. This threat is higher on the territories of the three above-mentioned hunting stations, which surround the park from East, North-east and North. That is why; special attention will be paid here on this threat, together with the poisoning, in case there is reintroduction. Additionally, attention will be paid on the hunters in the villages around the park, and to some more villages South of Tazha section.

5.9.7. Social rejection of the project

The fact that reintroduction will take place on the territory of the park is not expected to be an important factor among the local communities as it will not verge on or enter protected territories. Our first experience with the local attitude here, however, shows that the people are very sensitive on that matter. There are two main reasons:

- First, the people in these villages, are in general conservatively-minded, and show strong resistance to activities new to them. They usually tend to expect some negative prospects, which will eventually affect them.
- Second, the people in the villages around Tazha section really have some negative experience with similar activities. About 25 years ago on the Eastern

part of the current park territory there used to be a hunting station, which belonged to the former *Secret Services*. It was used for hunting by a very limited number of people. Its territory was inaccessible for other people. Led by the desire to provide bigger trophies from the Brown Bear, the management of the hunting station released several specimens of Carpathian Brown Bears. These bears, which are essentially different from the Bulgarian population, were bigger and much more aggressive, mainly diurnal and real carnivores. According to the local people they caused huge damage to the local livestock. Fortunately, these specimens were shot later on, thus not affecting the local Brown Bear population.

Because of this some local people express their fears that the vultures will endanger their lambs and goats. BPPS initial talks have obviously put down these fears, but a future information campaign is needed.

6. The Reintroduction

6.1 Methods and activities

6.1.1. The "Release cage" method

Our choice of reintroduction method is based on a detailed survey of most of the existing publication and reports resulting from 30 years vulture reintroduction experience in France, Spain, Austria, etc. Being involved in the BVAP we are in continuous contact with these same people and organisations that actually first developed the vulture reintroduction methods and later on initiated BVAP itself. Throughout the last few years we have been able to benefit their valuable advice and guidance. The summit of our cooperation took place in May 2006 in the village of Peyreleau located at Massive Central – the most successful reintroduction site in France. One week training seminar on the Griffon reintroduction was held there for the teams of BVAP local partners, with three BPPS representatives taking part in it.

We were introduced in details to the reintroduction techniques by leading experts in the area from BVCF and LPO (France). Mr. Michel Terasse – one of the most experienced Griffon reintroduction experts was among the lectors. Theoretical parts and field practices were combined to transfer the knowledge that has been systemised for tens of years. Two more Griffon and one Bearded vulture reintroduction sites were visited during this trip.

This experience helped us choose the most appropriate reintroduction method to be applied to the specific conditions of Central Balkan National Park. We all considered the **"Release cage"** technique as most relevant for the Griffon vulture reintroduction in Stara Planina Mountain project as well.

6.1.2. Griffon vulture sources

The main source of birds for the reintroduction programme will be the Spanish and French Griffon populations which are viable enough to provide it. Our

partners from BVCF, Spain and LPO, France already declared their readiness to supply the needed number of individuals. These will be mostly juveniles born in the wild or vagrant birds which at some point needed treatment in a rehabilitation centre and eventually were kept for reintroduction purposes. Big numbers of birds are collected this way each year at the recovery centres in Spain and France.

A group of 10 to 12 birds will be transferred each year to the Central Balkan Reintroduction programme. The transportation will be assured with all the needed documents (CITES passports, medical examinations etc), and then the birds will be sent by vehicle or shipped to Bulgaria by plane. Upon their arrival, they will spend one and a half month of quarantine at the CITES Wildlife Rehabilitation Centre of Green Balkans in Stara Zagora and then be moved to the release cage at the reintroduction site.

6.1.3. Marking

In Green Balkans Rehabilitation Centre the birds will be ringed for better identification with both coloured individual (photo 16) and standard Bulgarian ornithological rings. This will help the monitoring in the cage and what is more important - will save that manipulation before the release itself when that would bring more stress to the feathers or radio entire situation. Still, the birds may get additional marking few days before the release for easier individual identification in the wild.

Bleached feathers and transmitters may be used for that purpose.

Photo 16. Ringing Griffon vulture at the reintroduction training seminar in France, May 2007.

6.1.4 Accepting, raising and releasing the birds

During the period of accommodation and maturation, the vultures will be kept in a release cage situated in the core area of the reintroduction site (photo 17). Regular monitoring, health care and feeding will be provided for the birds. During the captivity social relations will form amongst them and possibly some pairs will be established. The location of the cage will provide wide view to the whole area which will stay imprinted in the memories of the growing birds and made them associate it with their own territory.

In the meantime the feeding place, closely visible from the cage, will operate to attract wild vultures, ravens and resident raptors in order to familiarise the captives with their future cohabitants. Being gregarious animals some wild migrating Griffons may get attracted by the presence of the numerous birds in the cage that in a way represent a colony and stay in the area. The closest active colony is at about 180 km away in the Eastern Rhodopes on the Southern border - a significant distance that very much lowers the chance of emigration after the release.

The release will take place in the early autumn of the birds 3rd year. The exact day will be chosen because of favourable weather forecast for the next few days, thus enabling the birds regain their flying abilities easier. By that time the vultures will grow sub adults and ready to mate. Autumn is the mating season when pairs are formed and territorial behaviour is performed – the main tool to bind the group to the area.

Photo 17. Release cage at the French most successful reintroduction site in Massive Central.

6.1.5 Post-release activities

A 40-day period of intensive monitoring and additional feeding will start with the release (photo 18). The birds will need to be supported during these most stressful days. The local people will be instructed to provide information on exhausted vultures that have been spotted in the area. BPPS team will be patrolling the area, ready to rescue distressed vultures.

After that period a regular monitoring on the behaviour of released birds will be performed and basic food supplies will be provided on the feeding place during the winter months. All participants in the Stara Planina mountain reintroduction programme will cooperate in the monitoring of the birds, exchange experience, and aim at a common general strategy.

Basically that same scheme of releasing will be repeated for several years until there are at least twelve breeding pairs in the area. This is what will mark the end of the reintroduction programme. After that the releases may continue but the number of birds released annually may be reduced.

6.1.6. Time table

Having in mind that most of the incoming birds will be juveniles, they will be kept in the cage at least until they reach the age of three, which makes it over 2 years after their arrival at the site. The scheme of the releases planned by BVAP is to release six groups of 10 birds between the years of 2009 and 2014 as the first group of 10 birds will arrive in 2007. A total of 60 birds will be released. After the last release, only monitoring and supporting activities will continue.

Photo 18. The monitoring of the released birds will provide valuable data on their condition behaviour and movements.

6.2. Feeding place

A joint project of the NP Directorate and BPPS for the construction of vulture feeding place has been recently funded and such was constructed in December 2006 (photos 19, 20). As mentioned above it neighbouring the future cage ground. The character of the place allowed us to have it only half fenced – the other half ends with vertical cliffs which makes it naturally inaccessible for carnivores. Another advantage of this special implementation is that in the same time the place resembles an air – strip making it very convenient for large raptors to lend and take off easily just by jumping of the cliff into the vast gorge beneath.

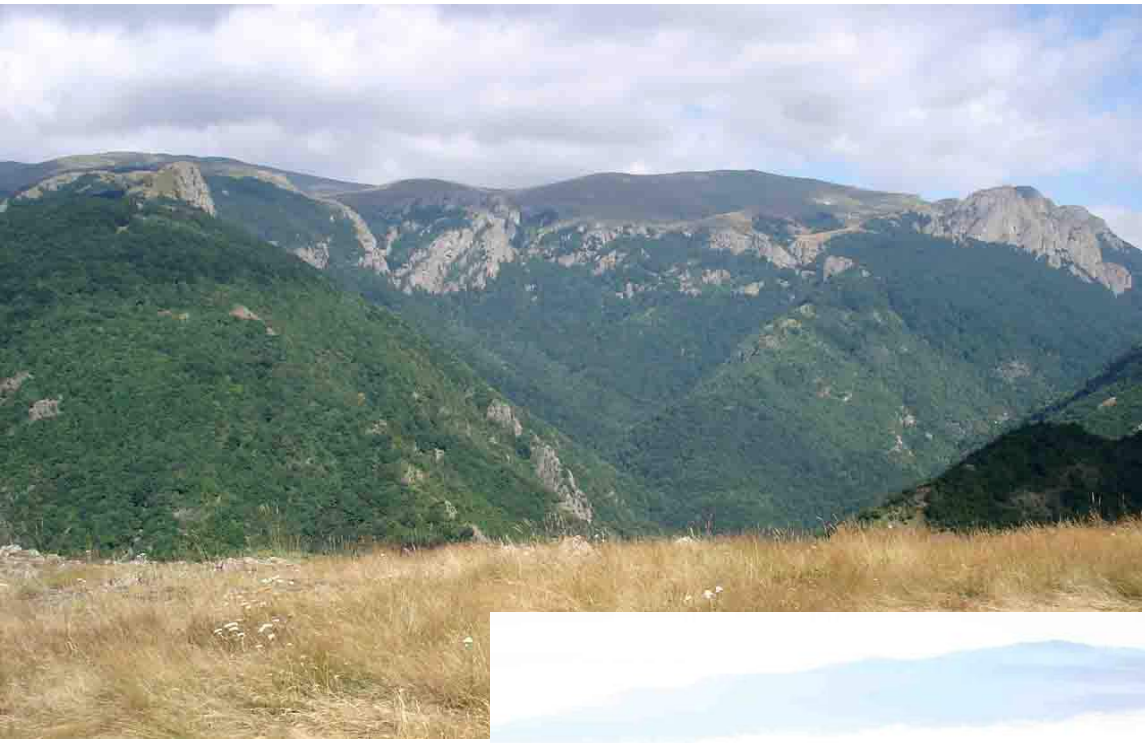
A scheme for collection of livestock carcasses has been initially introduced throughout the local settlements and regular feeding started. Up to date over 1000 kg of carcasses are provided at the place. The veterinary regulations are strictly observed and examinations of the cause of death is done every time before we take the carcase. Animal whose death has been caused by dangerous disease is not taken out to the place (see 5.4. *Food availability* for additional information).

Photos 19, 20. Right after the construction of the vulture feeding place in December 2006, BPPS started a regular feeding with livestock carcasses and slaughterhouse sub products.

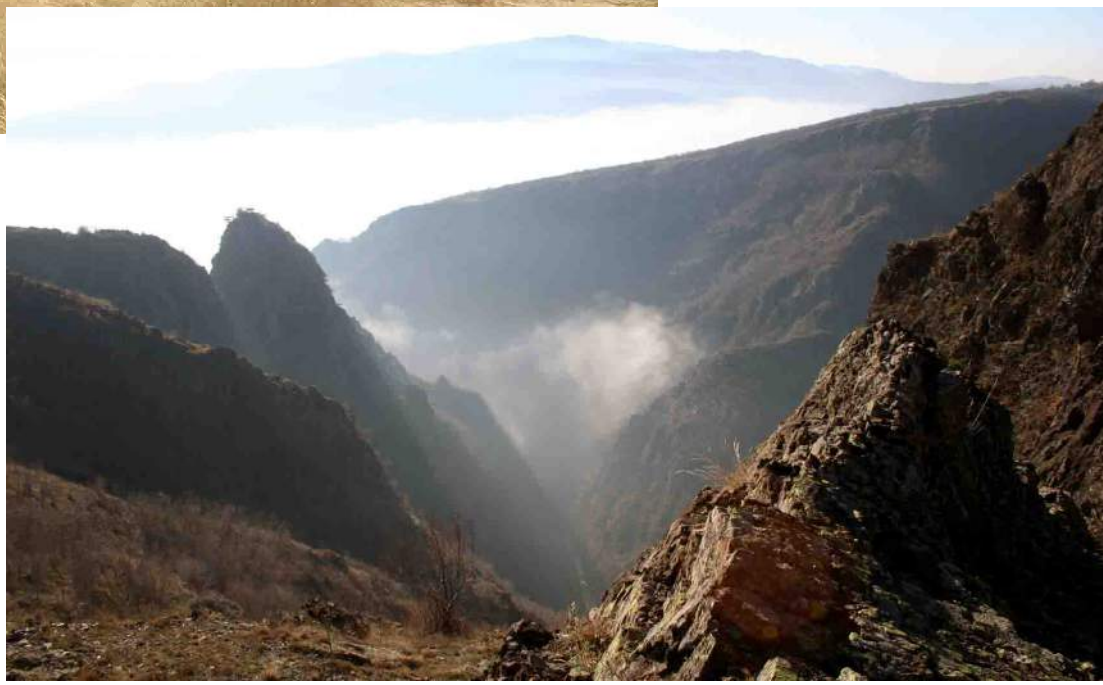
Soon the food attracted Golden eagles, buzzards, hawks and ravens. We still believe that migrating Griffons may appear at the feeding site in Tazha park section.

6.3. Location of the release cage and the feeding place

The release site has already been identified by BPPS and approved by the Reintroduction Committee during its visit to the park in March 2006 (photos 21, 22). This is Tazha park section (see map 3) which features appropriate Griffon habitat, low threat level, and food availability. The area is a former nesting site of the species. A proper place for the construction of the release cage (aviary) and the feeding place have also been selected. The is location on the edge of the Tazha river gorge (photo 22) on the Southern slopes of the Central Balkan mountain range (central Stara Planina Mountain) at 1100m altitude.



Photos 21, 22. The chosen release cage site is overlooking to both nesting opportunities and foraging grounds. The cage is to be constructed on a wide meadow at the edge of Tazha river gorge (down). This will allow the Griffon vultures in the cage to get imprinted with the landscape and to associate it with their own.



The feeding place is located only few meters from the future age. That will help the birds to get used to the other resident raptors and hopefully, wild Griffons visiting the place. The birds in the cage will strongly attract their wild relatives.

The chosen release cage construction ground combines some highly important advantages:

- Area with high level of protection with restricted human presence.
- Easy access and maintenance of the captive birds in the cage due to the gravel road connecting the nearest village of Tazha with the ranger guards outpost of “Sweet water”.
- Possibility for supplying the feeding place and the cage with food all year round by a vehicle.
- Easy to be monitored and secured by the near outpost – ca. 400m away, where park rangers are continuously on duty.
- Restricted human presence in the area by park regulations.
- The cage site neighbours lifting thermals. This is important for the birds at the moment of their release as it will help them restore their flying abilities and minimise the stress, the chance of loss and starvation.
- Easy and quick access for the released birds to the feeding site (established next to the cage).
- The Southern disposition of the cage will assure softer winter conditions that will benefit the birds and enable its maintenance. On the other hand, it will allow the birds to descend down the gorge during the first days after the release and will not let them leave the area flying at longer distances.
- The gorge relief allows the organisation of rescue feeding sites during the first month after the release, agreed as a stress period, to support the birds that might lose elevation and weaken, not being able to reach the main feeding site.
- The gorge presents numerous cliffs and single rocks and is basically a suitable habitat for roosting and nesting.
- Vast, open foraging territories are present by the hilly mountain pastures of Botev and Triglav ranges.
- Former homeland of numerous Griffon vulture populations.

6.4. Infrastructure and accessibility

The existing infrastructure includes:

- Gravel road (11 km long) connecting Tazha village and the park outpost “Sweet Water”.
- The outpost provides drinkable water, two beds for the rangers, one of which could be used by a person who is carrying out the monitoring.
- A vulture feeding place is under construction and will be ready in October 2006.

Infrastructure that needs to be developed:

- Release cage
- Branch off the main gravel road to the feeding platform (250m long).

6.5. Cage plans

The cage plans are approximate and will be suited to the specific relief of the chosen spot, However they give pretty clear impression about the size, the construction and the interior of the cage (see cage plan)

6.6. Information campaign

We consider the information /public awareness/ campaign as an important tool to assure the success of reintroduction and to bring about change in the local mentality and attitude to vultures and their presence in the region. To date BPPS has disseminated brochures and posters on vulture conservation and problems. The main negative factors that could affect vultures are illegal shooting and poisoning, so these are the main problems to be targeted in the information campaign.

Seminars concerning the legislation and the proper reaction in cases of illegal use of poisonous baits have already been organised for representatives of different target groups in the area (i.e. farmers, hunters, forestry and park officers, etc). Movies on vulture conservation were played at the local cable TVs and some brochures were distributed to the locals.

However, the broadest awareness campaign is to be implemented in parallel with the reintroduction programme itself. The local people and the population of the neighboring towns will be introduced to the reintroduction project and the local people will get involved in project activities in different ways. New brochures and posters on the reintroduction project will be printed out and distributed. TV channels, radio and press will be involved to disseminate information to the wider public. Seminars, presentations, workshops will be organised to inform and involve different target groups. BPPS will put special attention to its work with children, pupils and students. Volunteer programmes will be developed within the project.

6.7. Resources for the reintroduction

6.7.1. Human resources

An experienced birds of prey expert from BPPS will be in charge of the Griffon vulture reintroduction in Central Balkan National Park. S/he will be coordinating and organising project activities as well as will participate in their implementation.

However, BPPS will need more people in charge to handle efficiently and with optimal impact project activities as the reintroduction programme is a major project. It is expected to provide job for at least two local men.

CBNP Directorate will participate in most of the activities providing human capacity (i.e. the park rangers) for guarding the area with the cage and the feeding place and fieldwork assistance especially in the monitoring process.

A volunteer network will be developed among the high schools in the surrounding region in order to involve the young people in the project.

As a main partner of BPPS, the Park Directorate is additionally expected to lobby for the project at a national level.

Photos 23 - 28. The BPPS team and Central Balkan NP Directorate have joined their efforts to bring back the Griffon vultures to their natural habitats. Local and foreign men, ranger guards, volunteers and office staff work all together in benefit of the nature conservation.

Our experience and the experience of our western European colleagues proved that the vulture reintroduction is a long process which demands constancy and inner motivation. Most of the achievements come step by step after many efforts. Yet we do believe it is possible.

6.7.2. Economic resources

6.7.2.1. Budget needed for the reintroduction in CBNP

Below is provided the expected budget based of all costs for a five-year period. Despite some slight changes that may occur, depending on decisions in the course of reintroduction, it provides a basis of the funds needed.

Budget breakdown for the reintroduction of the Griffon Vulture in the Central Balkan National Park, Bulgaria. 2007 – 2011 in (EUR)

General costs							
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**
Project leader	6 400	7 040	7 774	8 551,4	9 406,54	10 347,2	**49 519**
Local – full time	3 000	3 300	3 630	3 993	4 392,3	4 831,5	**23 146,8**
Local – part time	1 700	1 870	2 057	2 262,7	2 489	2 738	**13 116,7**
Accountant	600	660	726	798,6	878,5	966,3	**3979,4**
Car and trailer	10 000						**10 000**
Insurances and taxes	500	550	550	550	550		**2 700**
Maintenance	200	400	500	600	700		**2 400**
Telescope and field glasses	2 700						**2 700**
GPS (2 units)	700						**700**
Camera	400						**400**
Multimedia projector	1 200						**1 200**
Field equipment (tents, sleeping bags, climbing equipment, etc.)	1500						**1 500**
Release cage	14 000						**14 000**
Sanitary quipment	100	100	100	100	100	100	**600**
Office rent + local	1 150	1 250	1 350	1400	1 400	1 400	**7950**
Accommodation or house rent	300	300	400	400	500	500	**2400**
Office maintenance (power, heating, water)	550	650	750	750	750	750	**4 200**
Power, heating, water for the house	200	200	300	300	400	400	**1800**
Communication (office phone, mobile phones, internet)	1500	1500	1800	1800	1800	1800	**10 200**
Bank fees	220	220	220	220	220		**1 100**
Sub-total general costs							**153 612**

Direct costs related to the reintroduction activities							
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**
							Feeding
Fuel	1500	1500	1800	1800	1800	1800	**10 200**
Veterinary taxes	400	400	400	400	400	400	**2400**
Feeding site maintenance	100	100	100	100	100	100	**600**
Monitoring							
Fuel	1700	1700	1900	1900	1900	1900	**11 000**
Public(bus) transport	120	120	160	160	180	180	**920**
Railway	120	120	160	160	180	180	**920**
Per diem	900	900	1 100	1 100	1 200	1 200	**5 400** **6 000**
Accommodation	200	200	400	400	400	400	**2 000**
Marking of the birds							
Rings	150	100	100	100	100	100	**650**
Radio tracking	6 000						**6 000**
Information campaign							
Fuel	400	400	700	600	600	600	**3 100**
Information materials	1 800	1 800	2000	1000	1000	1000	**8 600**
Per diem	350	350	500	500	500	500	**2 700**
Rent a hall	50	50	80	80	80	80	**420**
Sub – total direct costs.							**53 060**
Sub – total general costs.							**153 612**
Sub – total direct costs.							**53 060**
					Grand	**total:**	**206 672**

** This budget has been prepared in compliance with current price levels in Bulgaria in October 2006, for the needs of the reintroduction. Judging from the inflation trends in the country an increase in the price of some commodities and services is expected, especially after the accession of Bulgaria to the EU in 2007.*

6.8 Support by the local administration

The most important authority is the Park Directorate, which supports the project by all means. BPPS has traditionally good relations with the Directorate. In November 2003 an MoU for cooperative work between the Park Directorate and BPPS was signed. Its main priorities are vulture conservation, Saker Falcon protection and birds of prey and owls conservation in general.

Other authorities, which are important for the project success, are the Regional Veterinary and Medicine Inspectorate – Stara Zagora, as well as the local

veterinaries and municipalities. Our experience gained in the region of Vrachanska Planina Mountain, led us to initiate good working relation with them.

The reintroduction site belongs to the administration of Pavel Banja municipality. It is also interested in the project and is ready to provide room for a Vulture visitor centre in the village of Tazha, i.e. the starting point to the reintroduction site.

6.9 Implementing organisations

The organisations directly responsible for the reintroduction project are the Birds of Prey Protection Society and the Central Balkan National Park Directorate.

6.9.1 Birds of Prey Protection Society (BPPS)

BPPS was established in 1990. Over the last decade it gradually earned its place among the active nature conservation NGOs in Bulgaria. BPPS office is situated in Sofia, the capital city of Bulgaria. The society has four full-time and two part-time staff, and about 40 members. We are currently working on five different projects as well as on some other activities which are not under certain projects, such as work with schoolchildren, proposition for designation of new protected territories, combating unsustainable new practices, such as construction of water power stations at inappropriate places etc.

Besides its work in the frame of the BVAP, BPPS main priority remains the disclosure and prevention of illegal collection of and trade with the eggs and young of raptor species. After several years of intensively pursuing this goal, we have already achieved encouraging results. A significant number of illegally caught birds have been confiscated, returned back to their nests, released in the wilderness, or - in relatively rare cases - sent to zoos or rehabilitation centres.

BPPS is currently working on the development of an Action Plan for the Saker Falcon in Bulgaria. This species is on the verge of becoming extinct not only the country, but also in its entire range, due to illegal taking from the wild, loss of habitats, electrocution, etc.

6.9.2 Central Balkan National Park

The CBNP management is implemented by the National Park Directorate – a regional body of the Ministry of Environment and Waters. The Directorate has its headquarter in the town of Gabrovo, and seven regional offices in Ribaritsa, Troyan, Stoikite, Tazha, Kalofer, Karlovo and Klisura – small towns and villages situated around the park territory. The park territory is divided into seven park sections (PS) which are as follow:

- PS Teteven – 12 521,15 ha;
- PS Troyan – 11 474,82 ha;
- PS Stoikite – 9 100,99 ha;
- PS Tazha – 9 359,19 ha;
- PS Kalofer – 7 994,19 ha;
- PS Karlovo – 11 479,8 ha;
- PS Klisura – 9 739,63 ha;

CBNP staff numbers 75 people, 44 of which are park rangers. In its work the Parks Directorate follows a ten-year Management Plan 2001-2010. Central Balkan NP Management Plan for 2001 – 2010 includes a Programme for Management of Wild Animal Populations. It envisages support and recovery actions directed toward species of conservational status, one of which is the Griffon Vulture (Gyps fulvus). Certain actions on Griffon Vulture reintroduction will be included in the new five-year plan of the Directorate (2006 – 2010).

As a recommendation under "Reintroduction of extinct species" of the annual report of PAN Parks – 2004, the Griffon Vulture is included along with the Capercaillie (Tetrao urogallus) and the Lynx (Lynx lynx). Its implementation and success is subjected to annual control from the Control Committee.

In 2004, the NP Directorate and BPPS signed a Memorandum of understanding and cooperation defining co–actions for recovery of the Griffon vulture as nesting species on the park territory. As part of the Memorandum, BPPS conducts a bird monitoring training for the park rangers. With the active collaboration of BPPS, the NPD developed a project proposal – "Recovery of the Griffon Vulture as Nesting Species in Central Balkan National Park" in order to secure funds for the establishment of a feeding site in Tazha park section, together with BPPS. The Directorate applied for funding to the "National Trust Eco Fund".

In 2005, the Directorate and BPPS published four different leaflets (3 in Bulgarian and 1 in English) focused on different target groups and aimed at raising local awareness on Griffon vulture taxonomy, distribution and status in Bulgaria. These will be used in information campaigns for project promotion among the local people around the park territory.

6.10 Central Balkan National Park benefits from a successful reintroduction

- Viable, self-sustaining population of the Griffon Vulture inhabiting the territory of the park.
- Improved environment for carcass eating bird species in the park and for the birds of prey in general.
- Gained valuable experience as a result of participation of its staff in successful reintroduction project. This experience will be very useful if other reintroduction projects take place on the territory of the park as envisaged. The species include Capercaillie, Lynx and possibly the Bearded Vulture.

- Significantly raised awareness of the local communities regarding nature conservation issues.
- Minimised and/or eliminated specific threats affecting the wildlife in and around the park, e.g. poisoning, shooting, disturbance, etc.
- Increased interest and number of visitors in the park – birdwatchers, photographers etc. as a result of vulture presence in the park.
- Possible restoration of old practices of grazing livestock in the high mountain pastures during the summer months. In case of successful reintroduction it may be a long-term project to provide natural food for the vultures and to decrease the artificial feeding. In this case there will be a lot of benefits for disappearing species and habitats in the park.
- Prestige gained from the successful reintroduction on its territory.

6.11 Advantages for the reintroduction process if taking place in the Park

BPPS does believe that the Central Balkan National Park is among the best places for the reintroduction to start with in the frame of the entire BVAP. Below are provided some of the advantages which the Park can provide, which are also prerequisite for successful reintroduction.

- The Park represents one of the best preserved habitats for the vultures on the Balkan Peninsula .
- This is the third biggest protected territory. Being a national park it has formally and in practical terms the highest level of protection because of the experienced rangers, the inaccessible territory and its legal status.
- Due to the reasons mentioned above, the park territory has very low threat status for the wildlife and the reintroduction process as a whole. Poisoning and disturbance practically do not occur, with poaching being the main concern. Habitat destruction, now and in the future is not possible. Human pressure on the territory of the park is definitely one of the lowest as compared to the rest of the country and other protected territories.
- Many experienced, enthusiastic and skilful staff, very familiar with the field work in difficult terrain, monitoring of wildlife, etc.
- The Park Directorate is a valuable partner due to its capacity and will to provide not only territory, but also additional human, material and financial resources for the success of the project, i.e. people, equipment, infrastructure, know-how and funds.
- Furthermore, the well-developed and expanding network of offices and information centres of the Park will greatly contribute to the outcomes of the information and education campaigns for the reintroduction.

- The number of wild ungulates in the Park has been constantly increasing since its establishment. BPPS does not believe that in the mid-term period their populations will be high enough to provide considerable part of vulture diet, thus lower their dependence from the feeding stations.
- Last, but not least is the fact that the park is situated in the very heart of Bulgaria and easy to be reached from all the corners of the country.

7. Conclusions

After 4 years of preparatory work within the BVAP and the compilation of a series of viability studies on the reintroduction of Griffon, Black and Bearded Vultures, the BVAP committee visited the potential sites in Bulgaria and Serbia to evaluate the conditions of the reintroduction The trip took place on 21-28 March, 2006. All four Bulgarian sites along the Stara Planina Mountain Range were visited, including Central Balkan National Park. The results of this viability study were then presented by BPPS. After the discussions, a field visit to the historic breeding cliffs and the proposed place for the reintroduction cage and feeding place was made and an evaluation meeting of the committee took place.

Its conclusions have been presented during the final meeting of the committee with all participating NGOs of the BVAP in Bulgaria and the Bulgarian Ministry of Environment and Waters.

At the meeting it was proposed to begin reintroductions as soon as possible.

CB National Park was considered a suitable site for Griffon Vulture reintroduction on the condition cases like the one with the poisoned Golden Eagles near the Eastern border of the park from December 2005 would not occur again for the next 2 years. In the meantime an anti poisoning information campaign must begin. CBNP site is of strategic importance for the Recovery of the Griffon Vulture on the Balkan Peninsula, as it connects the existing colonies in Western Serbia with those of the Eastern Rhodopes by re-establishing historic colonies located in between. Once conditions are there, the reintroduction will help connect again the Bulgarian colonies with the Macedonian ones.

For the last 3 years BPPS has worked on the preparation of 2 viability studies and the implementation of BVAP activities in Central Balkan NP and Vrachanska Planina Mountain. The experience gained has brought the team to the conclusion that natural recolonisation of the former Griffon breeding sites is not possible because of the general decrease of the Balkan populations. It has been proven that reintroduction is the only adequate step to ensure the future of the vulture species in Bulgaria and on the Balkans. However, the most important issue for the start of the reintroduction programme in the Stara Planina Mountain Range remains the availability of funds to sustain the activities and we hope that this study will convince people and organisations to support it. The documents presented above cast light upon the resources of CBNP to sustain the reintroduction. Estimating the collected data we do consider that this would be of great benefit not only to the Griffon vulture recovery but

to the whole environment in the target place. This project will bring the general conservation idea to the minds of the local communities and will definitely become a national property. Its success will be something our children will remember, value and be grateful for.

8. Acknowledgements

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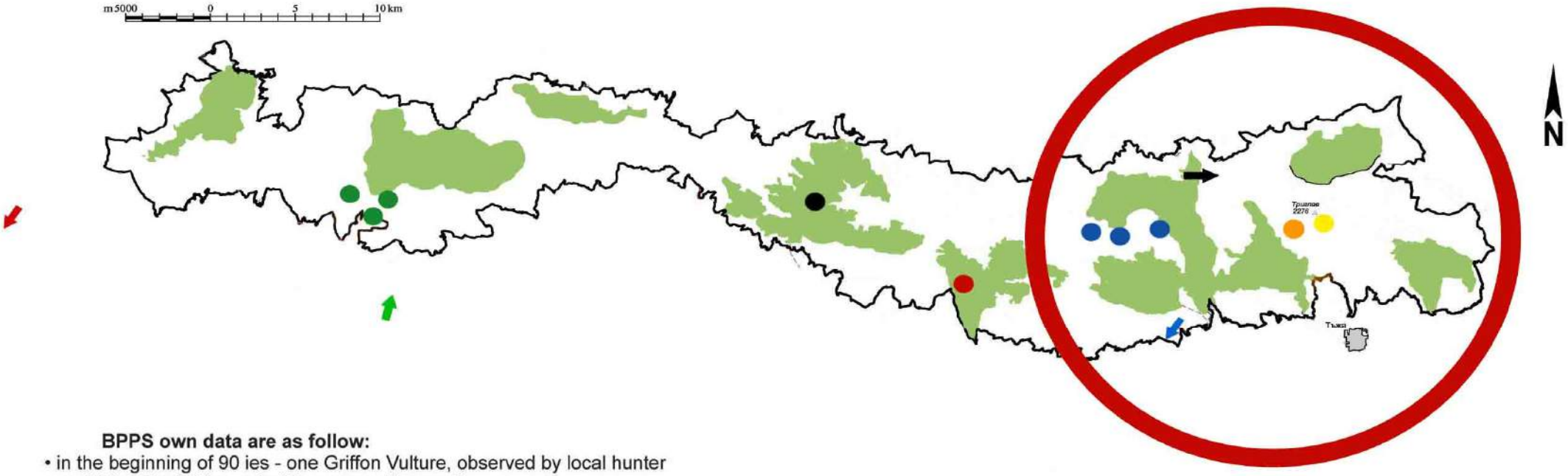
Map No 1. Observations of vultures in Central Balkan National Park



BPPS own data are as follow:

- in the beginning of 90 ies - one Griffon Vulture, observed by local hunter near Vejen Peak (showed with green on the map).
- One bird near Triglav Peak during the summer of 2000] (showed with yellow on the map)
- One specimen observed feeding on a dead horse in September 2000, near Tazha hut(showed with black arrow on the map)
- Two birds feeding on caw carcass near Botev peak in the summer of 2001 (showed with blue on the map)
- Possible observation of 7 Griffon Vultures near Botev Peak (showed with blue arrow on the map). BPPS was reported by a local sympatizant who observed „…7 big, pale eagles, feeding on caw killed by thunderstorm."
- One adult bird near Koprivshtitsa (10 km. south from the park) in the morning of 11 June 2005. The bird was soaring above shepherd pasture and flew toward the Central Balkan National Park (showed with green arrow on the map)
- Four birds observed around 10.11.2006 flying towards the 20 horse carcasses killed by lightning in sokolna reserve one month earlyer (showed with orange on the map).

During the last 40 years, the following data exist:

- 1 specimen near Botev peak and 1 near Rusalka peak during 60 ies - poisoned birds (showed with blue on the map)
- one pair is observed regularly in the Vejen Peak area between 1965 - 1973 (showed with green on the map)
- one pair near the Stara Reka nature reserve in the beginning of the 80 ies (showed with red on the map)
- two birds observed near Vejen Peak on 19.09.1984 (showed with green on the map)
- two birds on the same place next year
- one year old Griffon Vulture caught on 23.06. 1986 near village of Mirkovo, approximately 12 km west of the park border. (showed with red arrow on the map) The bird was sent to Sofia Zoo.

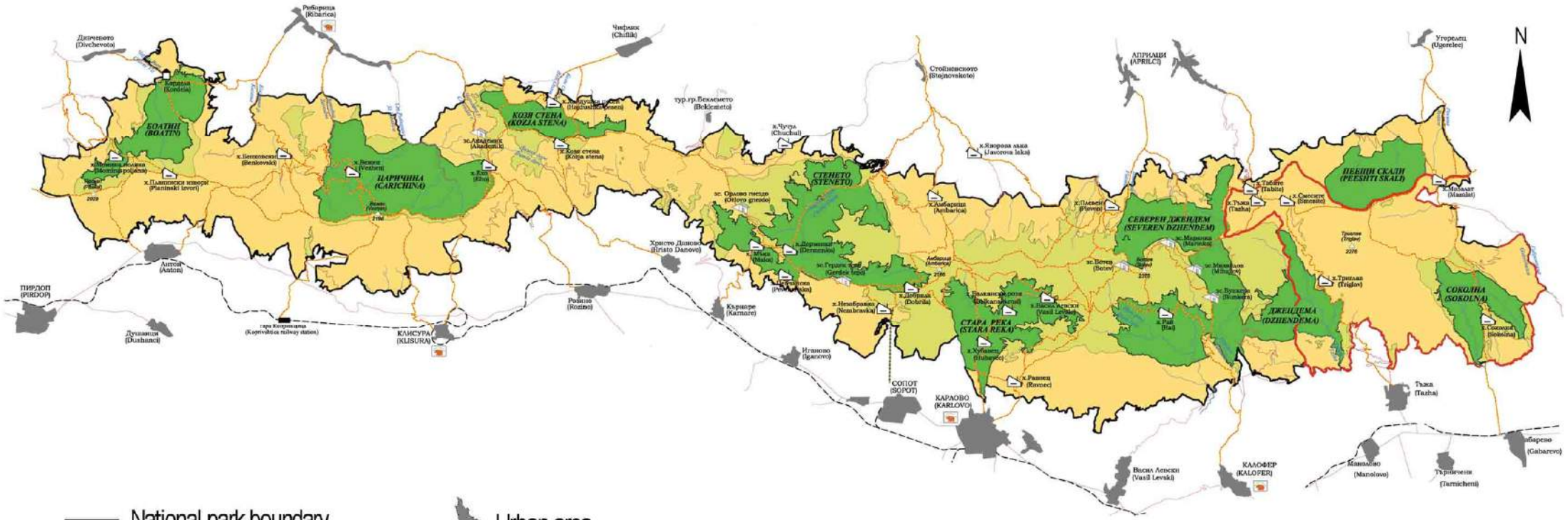
Black Vulture – the last pair was observed in Steneto nature reserve (showed with black on the map), in the middle of the 70-ies

LEGEND

Central Balkan NP border

Reserve

The reintroduction site (Tazha park section and the neigboring territories)

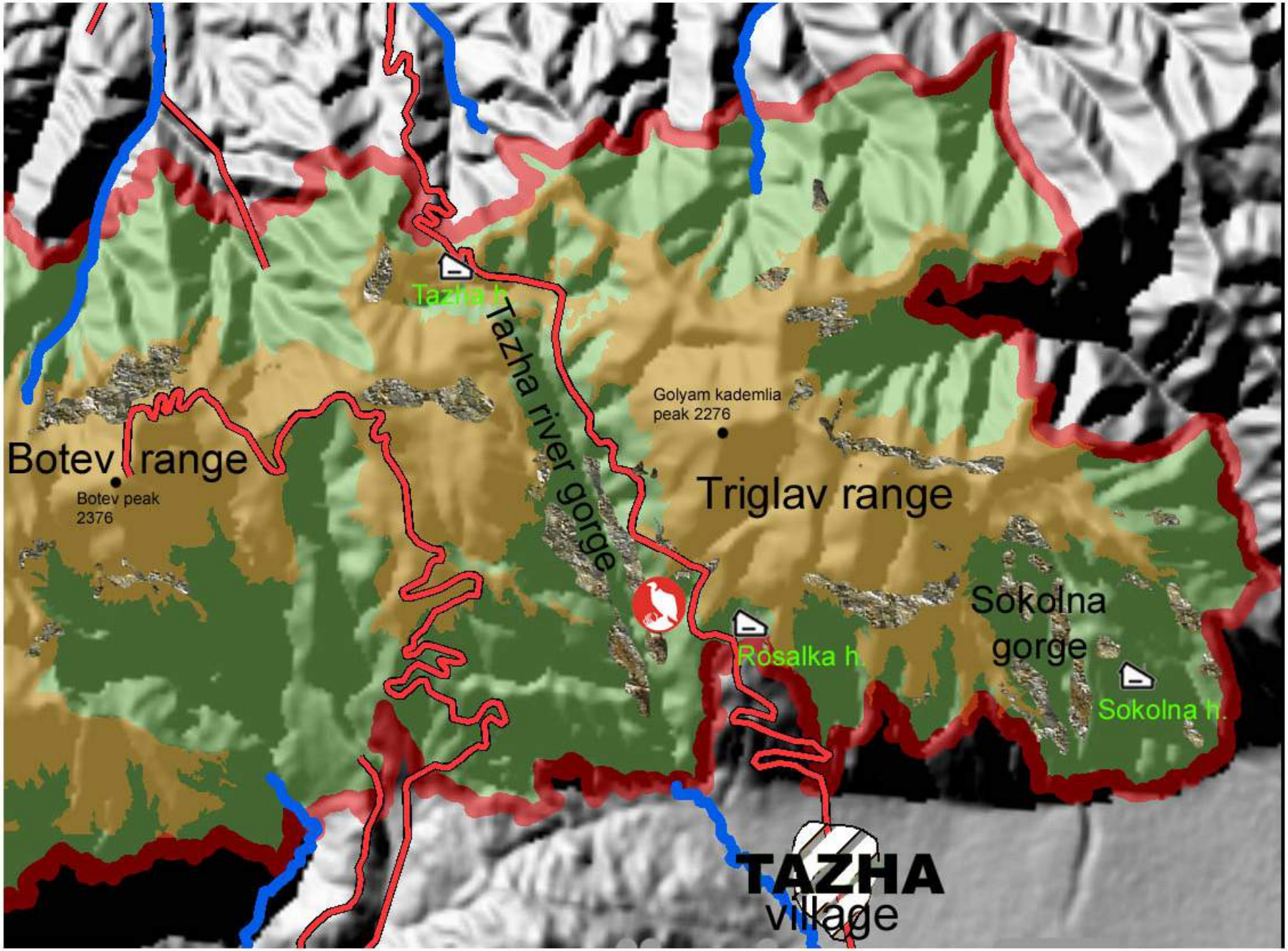


- National park boundary
- Reserve/Reserve zone
- Limited human impact zone
- River
- Road
- Tourist trail/Tourism zone
- Railway
- Chair lift
- Multi-Purpose zone

- Urban area (KALOFER)
- Peak with elevation and name (Botev △ 2376)
- Tourist hut/Infrastructure zone
- Tourist shelter/Infrastructure zone
- Forest lodge/Infrastructure zone
- Cave
- Tazha park section boundary

Map No 2.

Central Balkan National Park zones



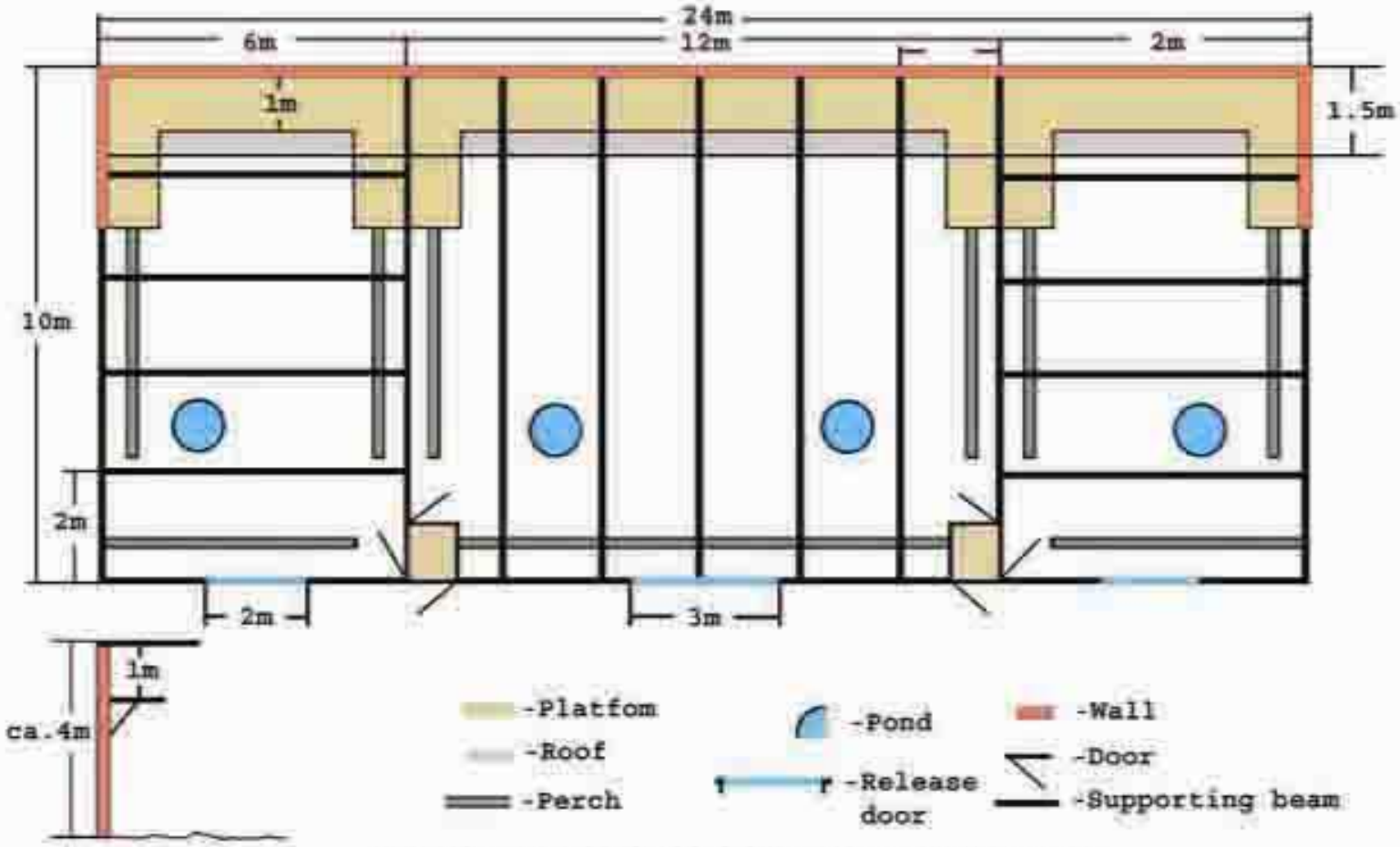
- The release cage and the feeding place ground

- CBNP boundary

Map No 3.

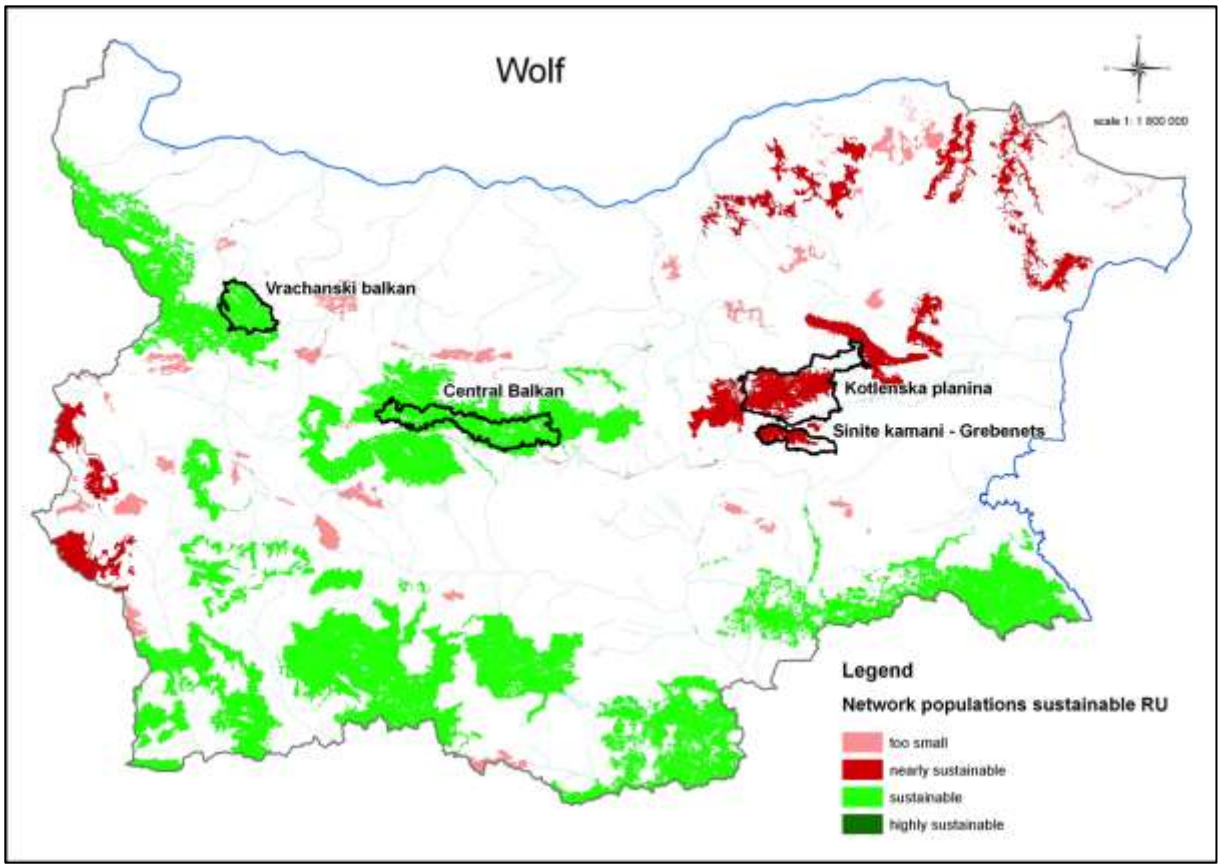
The actual reintroduction site - the most eastern end of the park, mostly at the territory of Tazha park section(see Map No. 1)

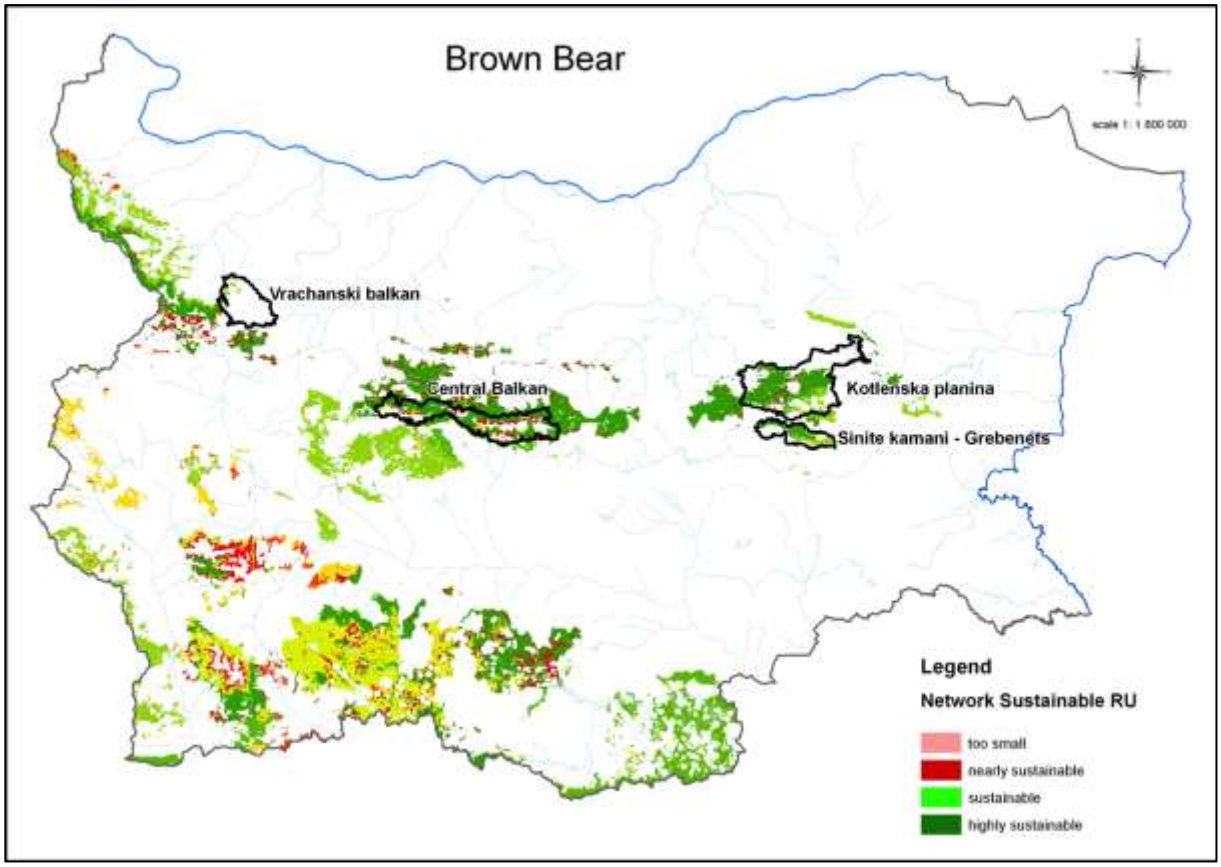
Release cage plan

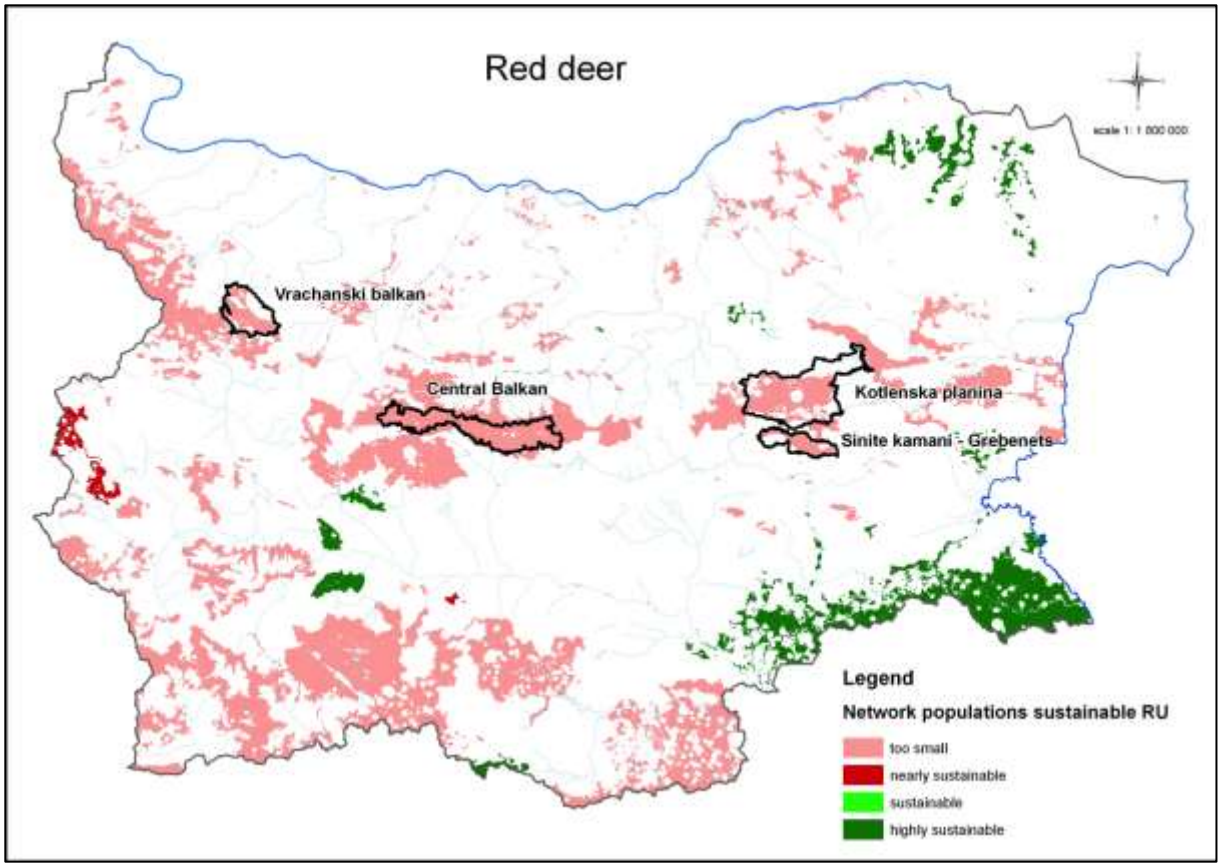


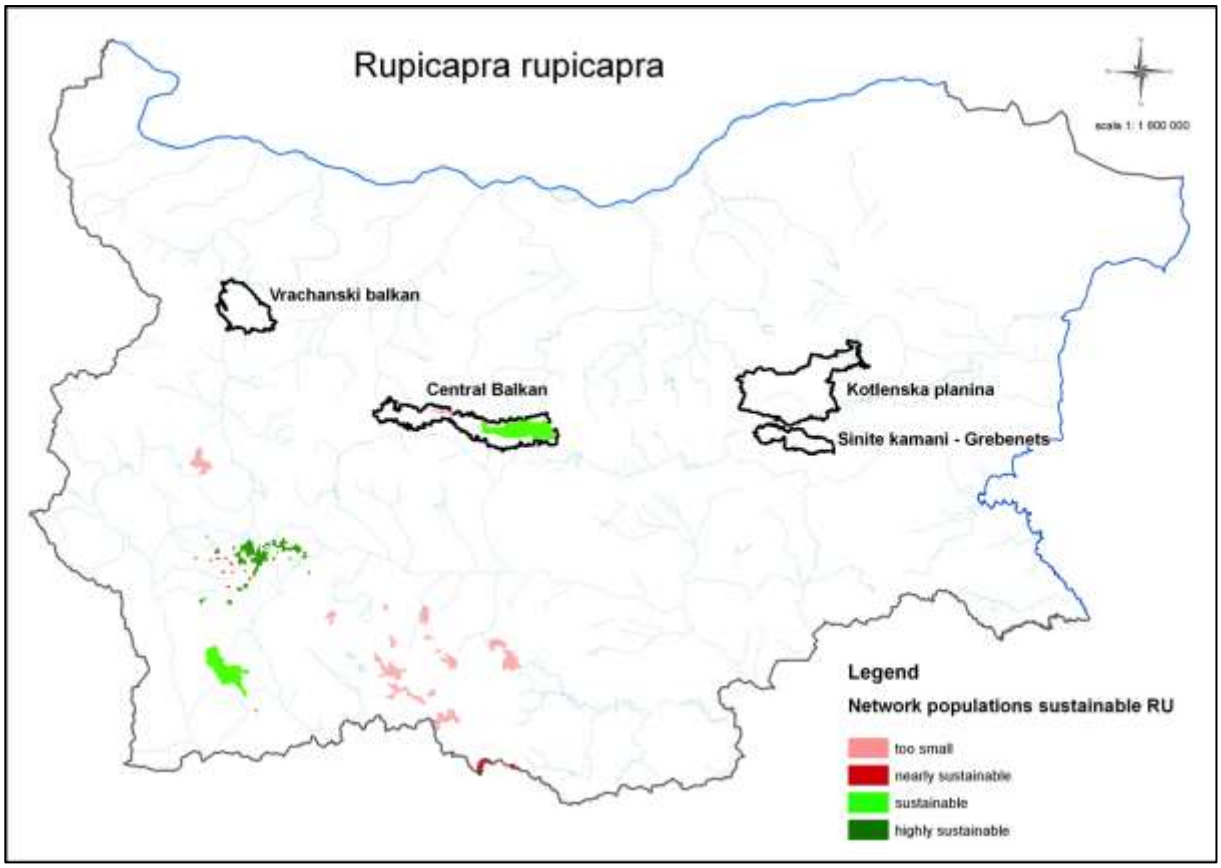
Note:the cage is devided into tree separate parts

IV Karten der Habitatmodellierung






Red deer
scale 1: 1 000 000
Vrachanski balkan
Central Balkan
Kotlenska planina
Sinite kamani - Grebenets
Legend
Network populations sustainable RU
too small
nearly sustainable
sustainable
highly sustainable


Rupicapra rupicapra
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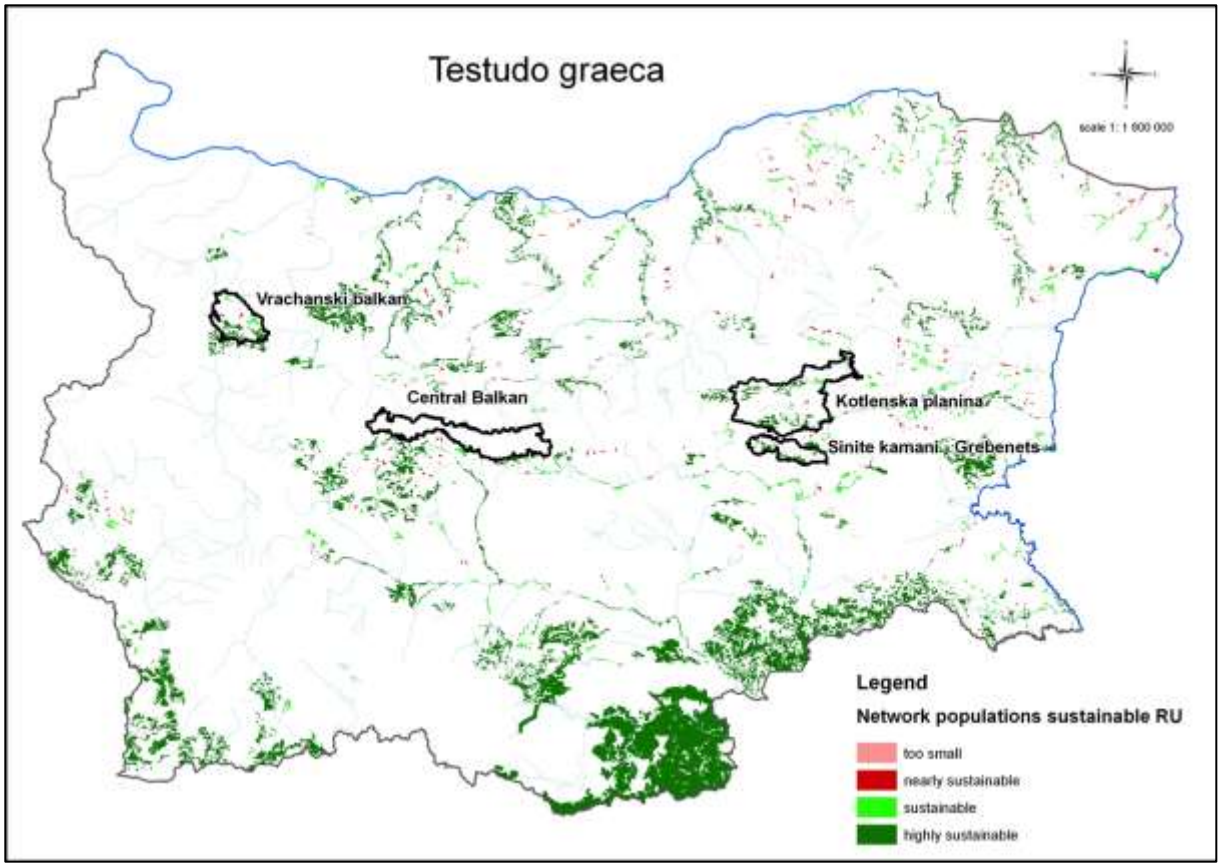
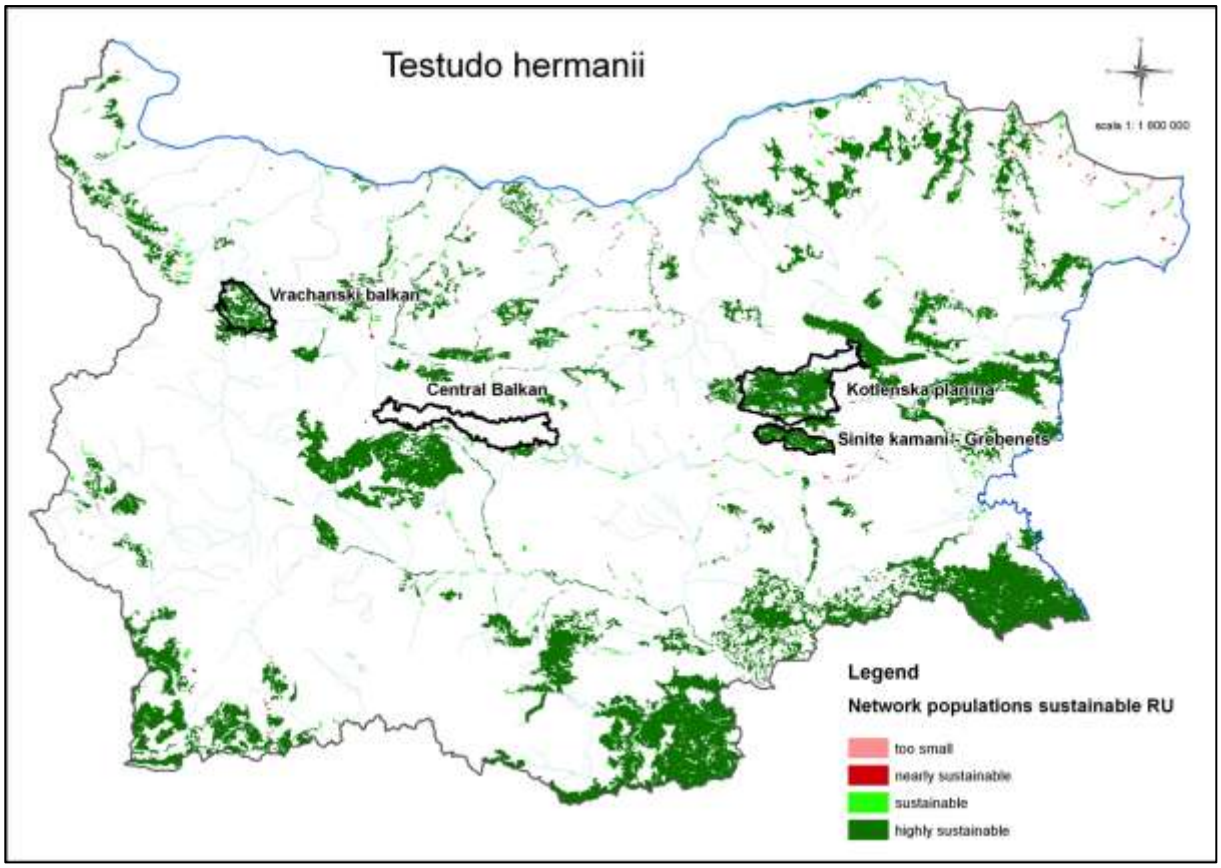
Vrachanski balkan
Central Balkan
Kotlenska planina
Sinite kamani - Grebenets
Legend
Network populations sustainable RU
too small
nearly sustainable
sustainable
highly sustainable


Testudo graeca
scale 1: 1 600 000
Vrachanski balkan
Central Balkan
Kotlenska planina
Sinite kamani - Grebenets
Legend
Network populations sustainable RU
too small
nearly sustainable
sustainable
highly sustainable


Testudo hermanii
scale 1: 1 600 000
Vrachanski balkan
Central Balkan
Kotlenska planina
Sinite kamani - Grebenets
Legend
Network populations sustainable RU
too small
nearly sustainable
sustainable
highly sustainable

3rd WORKSHOP ON ACTION PLAN FOR THE RECOVERY AND CONSERVATION OF THE VULTURES ON THE BALKAN PENINSULA AND ADJACENT REGIONS

11-13 May 2011
Vratsa, Bulgaria

FINAL REPORT

BVAP
Balkan Vulture Action Plan

Organized by:

Jovan Andevski, BVAP coordinator, VCF; Irena Andreevska, Workshop moderator; Sandra Bakkers, VCF; Elena Kmetova, Green Balkans

Organization: The WS was organized by the Vulture Conservation Foundation (VCF) with financial support from the Frankfurt Zoological Society (FZS), Mohammed bin Zayed Species Conservation Fund and the LIFE+ project "Recovery of the Populations of Large European Vultures in Bulgaria". Hosting organization was the Bulgarian NGO - "Green Balkans".

Purpose of the 3rd WS on BVAP: Balkan Vulture Action Plan (BVAP) was developed in 2002 as a long-term strategy for the conservation and recovery of vulture populations in the Balkan Peninsula, an important part of their European distribution area. Since the start, more than 34 organizations and institutions from 12 different countries have been participating in BVAP - an international network that is vital for conservation of these species. The 3rd Workshop on BVAP was organized in order to unite former, current and possible future partners to update the Action Plan and set priorities for the next 3 years.

Preparatory activities: Although the period for the preparation of the WS was very short (one and a half month!), huge efforts were put by the organizers and massive work was done in order to get important information on the current status with the implementation of the BVAP in the region. The preparatory activities were crucial for successful realization of the WS with limited duration from only 2 working days and demanding objectives (mentioned afterwards).

The following activities were realized during the preparatory period:

- First announcement was sent to all possible participants;
- Registration form was prepared and distributed as electronic application together with a short information on the program;
- Practical and detailed questionnaire was prepared and developed as an electronic application and distributed to 80 participants on April 14th (one month before the WS);
- Based on the feedback received from 34 participants within the given timeframe (by April 22nd), pre-assessment on the BVAP was made. These results were used as a starting point for the guided discussion which took part later, during the second working day of the WS **(Annex III)**;
- Promotional WS materials were also designed and produced (Banner, small posters, Folders for the WS materials, notebook, ID cards etc) (**Annex VI**)

Objectives of the 3rd WS on BVAP:

General objective:

To define priorities for the next three years – create Mid-term Action Plan for the recovery and conservation of the Vultures on the Balkan Peninsula and adjacent regions

Main objective:

To provide consensus on future Mid-term priority objectives and activities related to recovery and conservation of the Balkan Vultures by participating countries

The specific objectives:

- To provide participants with a general and detailed overview on the situation with Balkan Vultures in the Region;
- To introduce the participants with the assessment of the previous Long-term Balkan Vultures Action Plan in accordance with the feed-back expressed through questionnaires fulfilled before the WS;
- To elaborate filtered proposal for the Mid-term Action Plan (by 2014), to collect recommendations and ideas for new activities and accept final mid-term Action Plan, and
- To provide input and discuss about "Providing funds for Vulture conservation: How to become more effective raising funds for the BVAP" as well as about the "Impact of Wind-farms and conservation"

Participants: More than 70 participants, experts from over 25 organizations gathered together in Vratsa. The majority of the participants came from NGO-s and public institutions responsible for Nature protection/conservation from the Balkans. However, the number of other experts representing NGO-s and European and World wide institutions for birds conservation who actively participated was significant (Spain, Germany, France, United Kingdom, Cyprus, Hungary, Turkey), see the List of participants in **Annex II.**

Language: The official language of the event was English. The methodology used: Power Point presentations and Moderated plenary discussions.

Dates and venue: The participants were accommodated in hotel "Chaika" situated in Vratsa Natural Park, Bulgaria. The arrival date was May 11th 2011. The working sessions were conducted on 12th and 13th of May 2011. Most of the participants left Vratsa on 14th of May 2011.

May 11th - Field trip and Official opening of the WS

According to the program **(Annex I)**, the first day was reserved for arrivals and accommodation while the official start up of the WS began with the excursion to the griffon vulture release site on Vratcanska Planina. This excursion was organized by the Bulgarian hosting NGO – Green Balkans.

The program continued at 19:30 at the Environmental Info Center – NATURA, situated in the old Eski mosque (declared for a cultural monument) in Vratsa.

The WS materials were distributed to all the participants before the opening ceremony. Welcome address started by Michel Terrasse, VCF President and Nikolay Nanchev, Director of "Vratsa Natural Park" who greeted the participants on behalf of the Bulgarian hosts. Jovan Andevski, BVAP programme coordinator from VCF shortly introduced the participants with the Workshop.
The Opening Ceremony was an opportunity to inform the journalists/public about the event so short press conference was held on the spot for the local media representatives.

May 12th - First Working Day

Session 1 – COUNTRY PRESENTATIONS

According to the foreseen program, the Workshop started with the short introduction into the working program. On behalf of the VCF, the President - Michel Terrasse addressed to the participants with a short overview into the history and future challenges of the BVAP.

The moderator presented the topics for both days as well as the objectives of the WS. The first session aimed provide participants with a general and detailed overview on the situation with Balkan Vultures in the Region.
The presentations were divided by countries in sequences by alphabet order except in the case of Bulgaria which, as hosting country was given the priority to start up this session and in the case of Turkey which presentation took part before the country presentations from Serbia since part of the Serbian experts arrived in Vratsa later during the first working day.

Michel Terrase at the opening of the first working day

Presentation of Elena Kmetova from the "Green Balkans"

The **Bulgarian** session was moderated by Luba Kolcheva, Director of the Bulgarian Environmental Partnership Foundation who started with the presentation about "Pre-reintroduction: The start of the coordinated activities".
Six (6) specific topics were elaborated by several organizations from Bulgaria ("Green Balkans", Birds of Prey Protection Society", "Fund for Wild Flora and Fauna" and "Bulgarian Society for the Protection of Birds").

Bulgarian participant is stressing the importance of the monitoring and wither networking

After the discussion, two presentations from **Bosnia and Herzegovina** followed by the representatives from Youth Club “Novi val” from Mostar and Ornitological society "Naše ptice" from Sarajevo.

Ena Simic is putting interesting question for plenary discussion: Are the local people from Bosnia and Herzegovina prepared for reintroduction of the Vultures? A precise plan has to be prepared before going into action!

The status of Vulture conservation in **Croatia** was presented before the second plenary discussion by the representative from the "Research-educational Centre for the Protection of Nature"

Success storey from Croatia! Yet, so many questions are waiting for answers!

Greece was the fourth country which presented the status of the Vulture population through four presentations on behalf of the following organizations/institutions: "Forestry Service of Ioannina", "Helenic Ornitological Society (BirdLife Greece)", "WWF Greece - Evros Project", "Society for Protection of Nature and Ecodevelopment (EPO)".

Minutes from the presentation by Dr. Rigas Tsiakiris, Forestry Service of Ioannina

After constructive discussion related to the Greek's presentations, the session continued with a presentation from **Hungary,** given by the representative of Hortobágy National Park, and two presentations from **Macedonia** ("*Wild Flora & Fauna Fund" and "Macedonian Ecological Society – MES")*

The discussion after this block of presentations was focused mainly on the problem of poisoning which was raised by Tome Lisichanec in addition to his presentation.


Hungarian and Macedonian participants during their presentations


Insufficient data about Vultures in Turkey (left) and Wind-farms as a threat for the Vultures in Serbia (right)

The session continued with the presentation about "Vultures in **Turkey**", by Bilgecan Şen from Doğa Derneği. This presentation attracted lot of attention and was followed by interesting discussion with questions and assumptions inspired by the presented facts and figures (based on older estimations, without official update from scientific researches/studies).

Participants from **Serbia** were the last who gave an overview into the general country situation on behalf of the "Institute for Nature Conservation of Serbia" and "Birds of pray protection fund".

In addition to the country presentations and in favour to the discussions on the importance of world-wide networking and monitoring of the birds, a short video

documentary on Vultures in Mongolia was broadcasted for the participants by its author - Bratislav Grubac, well known Vulture conservationist from the Institute for Nature Conservation of Serbia.

In total 21 country presentations elaborated during the first working day, provided the participants of the Workshop with a broad range of information, all related to the results of projects implemented in the period between 2005 and 2010. Also, an update on vulture status and threats per countries was given by the project leaders.
Already here, the future priorities were pointed out and discussed at the plenary. Most of these issues – problems and experiences are common for the Balkan countries.

The priorities for discussion were listed and taken into consideration during the next session

The last presentation at the first working day was reserved for Michael Brombacher, the newly appointed Head of Europe Department, **Frankfurt Zoological Society** (FZS), Germany. Current situation and the future priorities of the FZS initiated interesting discussion among the participants. The role of the FZS as the most important donor in the past years was underlined and appreciation was expressed by all the participants. The fact that there will be a cut in the overall budget of this organization will have to be considered when projecting future financial support. The future decision on: Where can FZS allocate funds will very much depend on the results from the assessment of the BVAP and the priorities set in the Mid-term Action Plan. At the same time, it was agreed that the relationship between the FZS and so far "target organizations" will be changed in the near future into a partnership with the Balkan Vulture Network.

Future financing policy of the FZS – should the Balkan beneficiaries be concerned?

May 13th 2011, Second Working Day

Session 2 - BVAP Assessment, defining mid-term Action Plan

The second working day continued with the second session which aimed to introduce the participants with the assessment of the previous Long-term Balkan Vultures Action Plan and to define recommendations and ideas for priority and new activities which need to be put in the mid-term Action Plan (considering the period until the end of 2014).

After the short introduction into the daily program, the methodology and instructions for Evaluation of the WS **(Annex V)** by the moderator, the session continued guided by Jovan Andevski, the BVAP programme coordinator.

Andevski gave a short overview into the implementation of the BVAP in the previous years, tackling the most sensitive points: time sequences between the two meetings, the importance of the networking between all partners involved, especially on the regional level, results achieved but also problems which have to be addressed in the future.
As for the start up of the discussion on the urgent and short term activities that need to be incorporated into the Mid-term Action Plan, the BVAP programme coordinator presented the results from the pre-assessment of the BVAP.
In order to do so, an electronic application with an assessment questionnaire was distributed to 80 people. He stressed the fact that only 34 answers were registered and those were used for the first filtering of the BVAP.

Jovan Andevski, the recently appointed BVAP programme coordinator – so many challenges are in front of the Balkan Vulture Network!

The summarized results of the pre-assessment showed the status of the activities, their urgency and relevance, both, in general for the Balkan Region and by countries involved.

Since many topics needed to be discussed, it was agreed that the discussion will continue with focus on the most relevant and urgent points.

Apparently, the objectives and the activities that scored the highest relevance and urgency in the electronic pre-assessment, matched those listed during the discussions from the previous day!
Therefore, the plenary discussion was guided by the priorities. In order to be able to go through the whole list, limited time for discussion (maximum 20 minutes) was given for each of the topics!

The following is the list of priorities which were intensively discussed on the plenary. More details from the discussions are given in the Minutes from the WS **(Annex IV)** from this report!

1. Widen or focus BVAP
2. Monitoring
a. common system
b. website/database
c. ringing
d. research questions
3. Poisoning
4. Egyptian Vulture
a. working group
b. restocking strategy
c. causes of decline outside Balkans

5. Feeding network
a. sustainability of existing network
b. EU regulations
6. Genetic issues (Griffon and Black)
7. Common reintroduction strategy
a. proposed activities BiH, Serbia
8. Improve involvement of rehabilitation centre
9. Improve capacity of NGOs
10. Lobby for legal status Griffons EU
11. BVAP as tool for economic development

After the exhausting but constructive discussion, some concrete steps for follow up were proposed and accepted at the plenary. Those, including names/responsibilities and dates, will be sent circularly for comments to all the participants together with the filtered Mid-term Action Plan.

Again, motivated by the challenges in front of the BVAP, Michel Terrasse stood up in front of the participants and reflected on the time when the first enthusiastic project for Vulture conservation started with 40 pairs remained. The reintroduction started successfully in one place and immediately another one was started. This is how the networking started to get establishing between the French and Spanish enthusiasts. Then, big disappointment in 1992, almost all the northern colony in Italy was killed by poisoning. Due to bad organization of Italian partners most of the projects failed...

...Today, some birds remain along the sea and it would be nice to reconstitute them. With this design we will accomplish something incredible...

Terrase expressed his deepest hopes that despite all the difficulties, this group of people gathered in Vratsa with the same ideas will ambitiously work together against poisoning and contribute to successful recovery of all Vultures in Europe.

After these encouraging addressing, although tired from the previous session, the participants continued to work with as high motivation during the last session.


The Spanish experts during their thematic presentations

Session 3 – Thematic presentations

The topics which were presented in this occasion were chosen based on the priority objectives showed through the electronic assessment done before the WS and the actual problems reported from the field.

The first topic: "Providing funds for Vulture conservation: How to become more effective raising funds for the BVAP" presented by Carlota Viada, Consultant from Spain, although confirmed to be very popular, did not raise any discussion afterwards.

On the contrary, the second topic: "Impact of Wind-farms and conservation" presented by Alvaro Camiña, expert from the Vulture Conservation Foundation (VCF) initiated very interactive and emotional discussion with many ideas for future strategy related to the wind –farm problem which has to be incorporated into the BVAP.
The conclusion from this discussion was that a working group on Wind-farms will be established and coordinated by Alvaro Camiña.

Finally, the WS came to the end. Surprisingly, but it seemed that despite the intensive working sessions and exhausting discussions, the participants could still work for hours.

And this is what all the participants appreciated mostly. As Jovan Andevski underlined during his closing remarks: *"...despite of the longer delay of the WS and high number of unregistered participants, the final turn-up is more than positive - Everyone was interested and highly motivated to contribute to the overall atmosphere of the WS and new partnerships were established..."*

He informed the participants what will follow: Presentations will be distributed, proceedings will be available and the draft update of the action plan will be sent. A small publication will be issued with summary of the presentations and data on monitoring and status. This also will be distributed widely.

At the end, Andevski express special gratitude to the donors who made this WS happen - the MBZ fund and the FZS. He thanked his collaborators for the help provided during the planning and realization of the event and underlined the role of the local hosting organization the Bulgarian NGO "Green Balkans" and the "Vratchansky National Park".

The WS was officially closed with gala dinner served in the hotel's restaurant where the endless discussion continued until late in the evening.

Conclusions and recommendations by the moderator: Many people approached the organizers to congratulate on the successfully organized and conducted WS.

Was it a success? Did we fulfill the objectives we set up at the very beginning?!

YES – Because of so high number of participants, because of high interest and interactive participation of all, with no exception!

YES - Despite obvious problems existing between different lobby groups within each country, everybody, with no exception, contributed to the positive atmosphere!

YES - Despite recent organizational changes and still weak organizational set up responsible for the Balkan Network, the organization remained on a high level!

YES - Because detailed overview on the situation with the Vultures in each of the countries present was elaborated with challenges, priorities and recommendations for future actions!

YES – Because partnerships were established and future actions agreed!

YES – Because strategic questions were put on a table and discussed highly professionally and beneficially!

YES – IF, after the WS all the participants remain committed to the idea of better networking!

YES – IF, after the WS, the organizers react fast and distribute draft update of the action plan, list of participants, copies from the presentations and the proceedings!

YES – IF, the Working Groups continue with regular work and report to the coordinator on a regular basis!

YES – IF, the coordinator (in agreement with the donor/s) makes clear decision for the future financing: What, Whom, How, By when... and **IF** clearly inform the participants on these principles!

ANNEX I

Realized AGENDA

Day 1 – 11.05.2011 (Wednesday)

Arrival of the participants and accommodation in hotel "Chaika", Vratsa Natural Park

15:00 – 18:00 Excursion to the griffon vulture release site - Vratcanska Planina

19:30 Opening Ceremony (at the Environmental Info Center - NATURA)

- Welcome address - *Michel Terrasse, VCF President*
- Welcome on behalf of the hosts – *Nikolay Nanchev, Director of "Vratsa Natural Park", Bulgaria*
- Introduction to the Workshop – *Jovan Andevski, BVAP programme coordinator, VCF*

20:30 Dinner

Day 2 – 12.05.2011 (Thursday)

07:30 – 09:00 Breakfast

Session 1 – Country presentations
(Moderated by Irena Andreevska)

09:00 – 09:15 Introduction into the working program

09:15 – 10:10 Bulgaria

- "Pre-reintroduction: The start of the coordinated activities", *Luba Kolcheva, Bulgarian Environmental Partnership Foundation;*
- "Vultures Return in Bulgaria LIFE08 NAT/BG/278", *Elena Kmetova, Green Balkans;*
- "Recovery of griffon vulture in Vrachanski Balkan Nature Park and Central Balkan National Park", *Gorgi Stoyanov & Ivan* Radunchev Burds of Prey Protection Society*;*
- "Establishing Griffon Vulture colony in Kresna Gorge as conservation tool for general vultures and wildlife conservation in Southwest Bulgaria", *Emilian Stoynov, Fund for Wild Flora and Fauna;*

10:10 – 10:40 Coffee break

10:40 – 11:10 Bulgaria - continuation

- "Status and Conservation measures of the Griffon Vulture in the Eastern Rhodope Mountain", *Dobri Dobrev, Bulgarian Society for the Protection of Birds;*
- "Conservation measures for Black Vulture in its main habitats in Bulgaria", *Borislav Borisov, Green Balkans*
- "Status, limiting factors and conservation challenges for saving of the Egyptian Vulture in Bulgaria: 2003-2011", *Ivaylo Angelov, Bulgarian Society for the Protection of Birds*

11:10 – 11:30 Discussion

11:30 – 12:00 Bosnia and Herzegovina

- "Eco development project in rural areas in B&H-eco centre Novi Val", *Adnan Djuliman, Youth Club "Novi val";*
- „Ornithological society "Naše ptice" (Our birds) and BVAP in Bosnia and Herzegovina", *Ena Simic, Ornitological society "Naše ptice"*

12:00 – 12:15 Croatia

- "Methods of Griffon vulture protection in Croatia", *Goran Sušić & Vesna Radek, Research-educational Centre for the Protection of Nature*

12:15– 12:25 Discussion

12:25 – 13:10 Greece

- "Status update of Vultures in Greece – current BVAP activities", *Lavrentis Sidiropoulos, Helenic Ornitological Society (BirdLife Greece);*
- "The role of Ioannina Perfecture (Epirus, NW Greece) for Balkan Vultures recovery and restoration: will our glorious past return back?", *Dr. Rigas Tsiakiris, Forestry Service of Ioannina;*
- "Protection and management activities for vultures in the Dadia National Park for the period 2006-2010", *Theodora Skartsi, WWF Greece, Evros Project;*
- "Protection of the Nestos Vulture Population – a case for international collaboration", *Hans Jerrentrup, Society for Protection of Nature and Ecodevelopment (EPO)*

13:10 – 13:30 Discussion

13:30 – 15:00 Lunch

<u>Session 1 – Country presentations - continuation</u>

15:00 – 15:15 Hungary

- "Carpathian Basin Vulture Conservation", *Petra Vásony and István Sándor, Hortobágy National Park*

15:15 – 15:45 Macedonia

- "Action plan for exploration and conservation of the vultures in the central, eastern and southern region of the Republic of Macedonia", *Prepared by: Emanuel & Tome Lisichanets, Wild Flora & Fauna Fund – Macedonia (presented by Metodija Velevski, MES)*
- "Vulture Conservation Project in Macedonia - Activities and Results 2005-2010", *Metodija Velevski*, *Macedonian Ecological Society – MES*

15:45 – 16:05 Discussion

16:05 – 16:35 Coffee break

16:35 – 17:20 Serbia

- "Present status and Conservation (or protection) of the vultures in Serbia in period 2004-2010", *Bratislav Grubac, Institute for Nature Conservation of Serbia (16:35 – 16:50)*
- *"Video Monitoring of the griffon vulture population in George Uvac", Irena Hribsek, Sasha Marinkovic, Birds of pray protection fund (16:50 – 17:05)*
- Vulture status in Serbia, *Boris Rakočević Sasha Marinkovic, Birds of pray protection fund (17:05 – 17:20)*

17:20 – 17:35 Turkey

- "Vultures in Turkey", *Bilgecan Şen, Doğa Derneği*

17:35 – 17:55 Discussion

17:55 – 18:10 "Frankfurt Zoological Society (FZS) – Current situation and future priorities", *Michael Brombacher, Head of Europe Department, Frankfurt Zoological Society (FZS), Germany*

18:10 – 18:30 Discussion

20:00 Dinner

Day 3 – 13.03.2011 (Friday)

07:30 – 09:00 Breakfast

Session 2 - BVAP Assesment, defining mid-term Action Plan
(Moderated by Jovan Andevski and Irena Andreevska)

09:00 – 09:10 Introduction into the working program

09:10 – 09:30 Introduction: "Balkan Vultures network - its importance and future perspectives", *Jovan Andevski, BVAP programme coordinator, VCF*

09:30 – 10:00 Presentation of the General results from the questionnaire/assessment of the BVAP

10:00 – 10:30 Presentation of filtered up-dated proposal (Draft I) including the new priority activities proposed by the participants

10:30 - 11:00 Coffee break

11:00 – 13:30 Plenary discussion

13:30 - 15:00 Lunch

Session 2 - BVAP Assesment, defining mid-term Action Plan - continuation

15:00 - 16:00 Continuation of the Plenary discussion and agreement on the second draft of the mid-term AP

16:00 – 16:30 Coffee break

Session 3 – Thematic presentations

16:30 – 16:50 "Providing funds for Vulture conservation: How to become more effective raising funds for the BVAP", *Carlota Viada, Consultant, Spain*

16:50 – 17:20 Discussion

17:20 – 17:40 "Impact of Wind-farms and conservation", *Alvaro Camiña, Vulture Conservation Foundation-VCF*

17:40 – 18:00 Discussion

18:00 – 18:30 Next steps, fulfilling evaluation questionnaire, closing of the WS

20:00 Gala Dinner

ANNEX II:

List of participants

	Last Name	First Name	E-mail	Country	Organization Name
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Annex III:

Minutes from the discussions during the working days

The workshop officially opened in the Environmental Information Centre – NATURA, in Vratsa Natural Park.

Day 2 – 12.05.2011

Short speech, Michel Terrasse

The Black Vulture Conservation Foundation and the Foundation for the Conservation of Bearded Vultures have been working over 25 years to recover the populations of all four vulture species throughout their original habitats in Europe. Some remarkable results were accomplished, and the experience gained was used to develop a strategy for vulture conservation in the Balkan region. The two foundations proposed to merge, working together for all the species. Because of technical and financial reasons it was decided to stop this merging process. BVAP is currently coordinated by Jovan Andevski, based in Macedonia.

After the birds of prey conference in Budapest in 2002, with the help of all the vulture experts we drafted BVAP. Now we are at the third workshop of this framework, and very much has been done up to now. The following two days will be used to assess the good and bad results and look into the future. Many organizations from many different countries came together for this meeting, which is already a very impressive result. On behalf of VCF I would like to wish you a very fruitful meeting.

Introduction to the working programme, Ireena Andreevska

Ten years ago, an action plan was made for a bird that is connecting all of us. The last meeting we had together was 6 years ago, which is a long time. The objective of the coming two days is to assess and update the Balkan Vulture Action Plan, setting priorities for the next 3 years. The programme is divided into three sessions:

1. Country presentations;
2. BVAP assessment, defining a mid-term action plan;
3. Thematic presentations.

Session 1. Country presentations

Discussions, questions and comments after country presentations Bulgaria:

Emilian Stoynov: A common statement for Egyptian Vulture should be developed, together with an urgent conservation plan containing very clear milestones. Ivaylo Angelov: International attention for causes of decline of this species is needed, in Europe and Africa.

Michel Terrasse: An International Action Plan for Egyptian Vulture exists, but it is not practical yet. Maybe RSPB can help to realize this.

Jovan Andevski: For the Egyptian vulture I would like to propose a separate meeting. We should relaunch the Egyptian Vulture Working Group to plan a constructive discussion about practical actions for this species. A responsible for organizing this meeting is appointed tomorrow at the Egyptian vulture discussion topic.

Discussion point for session 2: Egyptian Vulture

Q:Wolfgang Fremuth: You listed lack of food as a threat. What are your ideas about the use and future use of feeding places?

A: Stoycho Stoychev: Feeding places are good to stimulate natural grazing and pastoralism. Since Bulgaria became a member of EU farmers can get support for this. However, because of bureaucracy farmers need help applying for support. Feeding places are also really important for Egyptian vultures, but we cannot rely on feeding places alone for recovery of this species

A: Marin: Feeding stations are really important for the monitoring programme, public awareness and providing good and healthy food for the vultures. As we know, poisoning is the biggest threat to vultures. Food on the feeding places is not just supplementary, but essential. It may be necessary to separate bigger feeding places into several smaller ones.

A: Emilian Stoynov: We want to propose municipal feeding sites to avoid long transportation of carcasses and it may not cost that much if municipalities are involved. The other part is to increase wild ungulate populations. Fallow dear is indigenous to the region, small, killed often by wolves and provides good food for vultures. Re-introduction of wild ungulates could be something to discuss.

Alvaro: A problem is EU regulation. Carcasses are the responsibility of veterinarians and vultures are a matter of biologists.

Discussion point for session 2: New EU regulations on carcass disposal.

Juan Jose Sanchez: Since the beginning of this action plan, activities against poisoning were one of the main focus points. Still, it is our main threat. Hunting activities are changing in Bulgaria, and the dormant working group against poison needs to be awakened.

A smaller group discusses the poison topic later this day. The outcomes of this discussions are presented during session 2 of the workshop.

Discussion point session 2: Poison

Windfarms are an urgent upcoming threat.

The genetic differences of Black vultures should be discussed.

Discussion point session 2: Genetic differences in Griffon and Black vultures

Discussions, questions and comments after country presentations Bosnia and Herzegovina and Croatia:

Ena Simic: People in Bisnia and Herzegovina are not ready to accept vultures in their country. If birds are reintroduced in Bulgaria and Serbia this may cause a problem.

Juan Jose Sanchez: I would like to congratulate the teams that are working in Bosnia and Herzegovina. It was the last country to be involved in the Action Plan. We tried to implement here all the experience gained in other projects. Reintroduction was not a short-term objective here; main objectives were to increase capacity, education, awareness raising and public understanding. Organizations from different cultures and religions are all working together in this country that is very important for vulture conservation because it is a bridge for the populations in Serbia and Croatia.

There is new material about the difference between populations in western and eastern Europe and we are willing to take this into account in the future.

Ana from B&H: we already started a reintroduction programme of griffon vultures. There is also a plan for Sebia and we are hoping to get help from Goran Susic for an eco-centre.

Discussion point session 2: Reintroduction Serbia and Bosnia Herzegovina

Discussions, questions and comments after country presentations Greece:

Lavrentis Sidiropoulos: Is the NE Greece area a sink for the Rhodopos? Is releasing vultures there a good idea?

Tourism development is a risky business. (example of canoes).

Question: will the vultures come back to Nestos? Proposal: closer collaboration in projects with Greece and Bulgaria in coordination of monitoring, feeding schemes, similar techniques for habitat evaluation, dangers etc.

- We should lobby EU to put griffons in higher priority. There is many in Spain but this will not save the species in the Balkans. We should get the attention of EU by common coordination of whole Europe.

Discussion point session 2: Lobby EU for higher priority Griffon Vultures

Q: Juan José Sánchez Artés: The situation in Greece was different in the past than it is now. Decreases in the last years have been terrible. We have to recover the regional vision for recovery of vultures locally. I would like to ask the Greek colleagues how the situation is with poison activities at the moment?

Rigas Tsiakiris: It has to be clear what is the reason behind poisoning. Feral dogs are one of the reasons. After several years of proposals for antidote programmes we started a project in collaboration with 2 Greece, Spanish and Italian colleagues. They want to form a stakeholder network to create poison free areas, import dogs that are trained to find poison, etc. Until now there are small things going on but there is no national campaign. This is a problem of coordination. We also cannot lobby the government, which is very important. Animal welfare organizations are not very open minded about feral dogs. We need your help to lobby the government. We have very good laws but they are not implemented. The other thing is hunting societies. We have an increase of the idea (supported by Universities) that we have to exterminate mammalian predators so we can have more partridges to hunt. After the prohibition of poisoned baits this practice

was decreasing but because of this campaign poisoning is increasing again. There is no strong will against the illegal poisoning. So, hunting organizations, states and NGOs should be put at the same table to find a solution. The third step is the farmers and their livestock conflict. The state is giving money as compensation to farmers but the system is not working very well. Only one farmer has been compensated (for 100 animals.. this is impossible!). Corruption is going on here. There are nice laws but farmers and shepherds do not get money.

The collaboration of all people working in the Balkans is the main point. Poison in one country will put a risk to the populations in the whole region! Same goes for windmills. There was a signed document by 500.000 people with a map of areas that should be excluded from placing windmills but the government ignored this.

Discussion point session 2: windmills

Discussions, questions and comments after country presentations Hungary and Macedonia:

Tome Lisichanets: We question how antibiotics influence the food sources of vultures.

All vultures marked are coming from Bulgaria, Greece but not from western countries or north so if anyone has an explanation that would be great. (no answer).

Q: Wolfgang Fremuth: are there any focal areas where most poisoned birds are found?

A: Metodija Velevski: we have identified two main areas that are a risk and possibly one more. The reason is mostly poisoning against wolves and feral dogs.

Because of a delayed arrival of Serbian participants, the country presentation of Turkey is next.

Discussions, questions and comments after country presentations Turkey and Serbia:

Q: Norbert Schaffer: Is there a website for vulture observations?

A: Bilgecan Şen: There is not many bird observers in Turkey. Maybe in other countries it could be useful. For me personally it is not of much use because I am interested in the nest. But I think in general observations can be used well in distribution maps.

Q:(?) Do you know much about the European part of Turkey?

A: Bilgecan Şen :We know there are some Egyptian vultures in European Turkey, but no large vultures were found breeding there.

Q: (?) Did you ever put carcasses to observe a big concentration of vultures?

A: Bilgecan Şen: This is a good idea. The dump site is not a good site at the moment, no big carcasses are put and the Griffon vultures are quite far. A bit more to the north it would be better.

Boris Rakočević: When marking and monitoring, we should take into account different colours and tags so we can see easily from which country birds are coming.

Alvaro Camiña Cardenal: Wingtags can not be confused. All the birds from Spain have the same tags to avoid confusion between countries. We discussed a lot about marking and we should work together in this way. It is necessary to have a common marking scheme. We need to use the same scheme in the whole Balkans. The combinations should be the same on the ring and wingtags. We do not want colours countries or years. With the unique code you can identify immediately the individual bird (year, country, etc).

Juan José Sánchez Artés: It is good that we are talking about this and try to find a solution as soon as possible because there will be many releases in the next couple of years. We could have a meeting to discuss and define a protocol for this. We can not spend another 6 months.

Discussion point session 2: common marking scheme

Q: (?) What do you believe is the reason for the strong increase of the populations in Serbia?

A: (?) We know that griffon vultures in Serbia have no problem with nesting. In winter, roads are very inaccessible. If we have much food we have many griffon vultures. We have not many poisoning accidents. So, the important things are nesting places and food in winter.

Discussions, questions and comments after presentation of Michael Brombacher:

Michel Terrasse: I would like to congratulate Frankfurt Zoological Society once more to help us as the only main sponsor for so much good work. We were once more friends that experts, sharing the same passion for vultures. It was not a complicated time to find money because Frankfurt Zoological Society was always there. We are facing an increasingly difficult picture now. I am happy to have you with us.

Elena Kmetova: On behalf of GreenBalkans we would like to thank Wolfgang Fremuth very much for all the work that he has done. Michael, he increased the level very much so you will have to work very hard to keep up! But in general the partnership is very important to us and even if there is less funding we would like to remain working together. Again, Wolfgang, thank you very much.

Q: (?) Who do you select for funding?

A: Michael Brombacher: This will depend a lot on the outcomes of tomorrow. Future priorities have to be defined and discussed with executives of FZS and Wolfgang to decide how to distribute funding.

Juan José Sánchez Artés: Thank you very much Michael for this presentation and Wolfgang for all your years of hard work. Decrease in funds is not surprising to us because many organizations are facing the same now. But better times will come!

Day 2 of the meeting was closed at .. by Irina Andreevska

Day 3 – 13.05.2011

Session 2: BVAP Assessment, defining mid-term Action Plan

Introduction and presentation of general results pre-assessment, Jovan Andevski

Since the start in 2002, the Balkan Vulture Action Plan is developed as a regional strategy for protection and recovery of vulture populations on the Balkan Peninsula and adjacent regions. BVAP is a guideline for working; the implementation of the logical framework differs per country. The first assessment of the BVAP logical framework was done in 2005. In this workshop the status, urgency and concerns of partners were discussed and the Action Plan was updated accordingly. Today, after 5 years of hard work it is crucial to update the Action Plan again, consulting all partners in the network and set priorities for the next years.

To make a proper update of the Action Plan, a pre-assessment questionnaire was sent, evaluating relevance of objectives and the urgency and status of activities in the current logical framework. The questionnaire was completed by 34 people from a total of 10 Balkan countries.

The objectives that scored the highest relevance and urgency in the pre-assessment are discussed during this workshop. Furthermore, questions arising during the first day of the workshop, and suggestions expressed in the questionnaire are listed for discussion. All topics can be divided into the following main themes:

1. Fundraising
2. Focus of BVAP
3. Monitoring
4. Poison
5. Egyptian Vulture
6. Feeding network
7. Genetic issues

1: Fundraising

Ranked as the most relevant and urgent is the objective: 'Raise enough funds to make the project viable on a long-term perspective'

This objective is discussed after the thematic presentation 'Providing funds for vulture conservation. How to become more effective raising funds for the BVAP.

2. Focus of BVAP

From a conservation point of view we need a wide scope. Vultures move, migrate and forage over large distances and for their recovery large ranges are needed. From a financial perspective there is limited money, which should be focused on priority activities.

The network is open to organizations and institutions from all countries that are interested in participating in BVAP. With a wider network we also have more possibilities for fundraising.

The objective of BVAP is to maintain this network. We can organize activities like this workshop, preparing strategy assessments, gathering opinions on priorities and focus and define priorities for funding.

BVAP also has a budget for funding activities focused on priorities in target countries. At the moment, the funding goes to projects that are ongoing and need to be financed. Focus is on actions where we already have results, to save existing populations, and fighting threats (poison, hunting).

Dora: am I missing information. We need an evaluation of the last 10 years. With this assessment we do not have a conclusion for the results of the last 10 years. We need two or three conclusions.

3. Monitoring

We should have a synchronized monitoring scheme, with a database including all information that is accessible to everyone.

GreenBalkans has money to develop a monitoring for the birds in the LIFE+ project. This could serve as a pilot project, if it is successful we could expand it into a wider platform.

If funds are limited, not all partners can follow the same protocol. Countries differ in how much and on what level they can work. We need to increase the quality of data together by sharing experience. We should define a minimum monitoring required to get reliable data, and if people can do more this is additional.

Priority: minimum monitoring on following the same protocol.

Theodora Skartsi is appointed to create a working group for establish a marking protocol.

4. Poison

Juan José Sánchez Artés: Yesterday evening a smaller working group discussed what is done so far to fight poison in the countries. Even after 10 years it is very difficult to have proof of poisoning. If we are at the same position after 10 years, what should we do? The group produced a document that will be distributed to all participants. It contains clear actions that could have a good effect on short term. The difficulty is that in some countries it is easier to implement than in others.

Jovan Andevski: According to the evaluation questionnaire, regarding the status of the objective stop poisoning, most activities are ongoing.

Juan José Sánchez Artés: In Mallorca we have been working a hard since many years. Last year we lost 50 red kites and 1 black vulture. Something may be wrong in the way we work. This problem cannot be solved in a few years, but it can be lowered.

Ivailo Angelov: We have no good laboratory in the Balkans. We never have a conclusion on what caused the death of the vultures.

Theodora Skartsi: This kind of problem (like lack of a good laboratory) could be included in BVAP work, conducting the minstery to improve these laboratories. We failed as NGOs to do it because we cannot go further than advising them (and try to find funds). If laboratories in Spain follow a method that is better than the protocol here, we should identify the costs of sending the samples to Spain!

Michael Miltiadou: In Cyprus, we came into a partnership with farmers. A special team of wardens was killing feral dogs and foxes within a certain range of the farming community. With insuring the absence of foxes the farmers will not use poison.

If poisoning is ungoing, we need leaflets, media attention, publicity, we keep an eye on it and monitor but give as much public attention as possible.

Priority: Improve the capacity of laboratories in the Balkan region

5. Egyptian vulture

Jovan Andevski: The Egyptian vulture probably is on top of the list of priorities right now. I do not know if we can discuss and come to conclusions in 15 minutes with different participants. I suggest to re-launch the EV working group and propose a meeting.

Rigas Tsiakiris: This is very important. We can host the meeting for the EV Working Group in Greece (and try to find funds for this meeting). During this meeting we will set up a baseline for a practical Egyptian Vulture Action Plan. Everyone can prepare something in advance to be distributed and discussed. The meeting will be after the autumn migration of EV, in October/November.

(?) Maybe people not involved in the group can give their opinion. I would like to have broader consideration in restocking strategy.

Norbert Schaffer: Can anyone highlight what are the issues and what are the different positions?

Ivaylo Angelov: We had a hot discussion in Bulgaria about reintroduction and restocking of Egyptian Vulture. There were a lot of questions what we do if the population goes extinct in certain parts of the range. BSPB has a position.

Emilian Stoynov: This should be a big discussion. The working group is people in the field, but strategy we cannot discuss here. For example: Can we take chicks from the wild, raise them and release them somewhere safe? This is just one idea and we should discuss if we can agree or not.

Stoycho Stoychev: We can not discuss these technical issues in 5 minutes. We may need a separate meeting because we do not have the time to discuss this now. There are several different approaches to use zoos, Spanish birds or not, taking chicks or not etc.

Ivaylo Angelov: I also agree that it is not the time and needs a big discussion. Our position is that we should look at Balkan as a whole population and should not take chicks even if the whole population goes extinct. We are against taking any wild birds from anywhere. And if we take birds from somewhere else we should take into account the migration routes.

Michel Terrasse: I would like to come back to the International Action Plan. I am really happy to have heard a Turkish colleague yesterday presenting some interesting data. Turkey may play a role in Balkan like Spain in Western Europe. Especially regarding Egyptian Vulture. We have some data (some EV were poisoned, some new pairs came because of the Griffon vultures). We can assess what happens in Africa and Balkans using the data we have also from Western Europe. We should identify the status of Turkish population. To reintroduce Spanish birds is insane, first because they are not doing well, second because they migrate differently. There is a EEP group working on reintroduction. We think there will not be a spectacular hope of saving the species in this way.

Wolfgang Fremuth: There is a captive population that is not considered yet. Karet Pita from Braha zoo and Pierre Gay from VCF and EAZA would be interested and also their colleague from Frankfurt Zoo. We could start a breeding network and possibilities for release can be studied.

Alvaro Camiña Cardenal: we must rely on the scientific information we have on the species. We know from a plan in Spain that if you put birds into a sink you will loose them anyway. We should spend our resources first in going against the decrease before we even discuss reintroduction or restocking.

Rigas Tsiakiris: It is important to list priorities. We need experts on different topics to get some good conclusions. Let's have one day with presentations by scientists about these issues during the Egyptian Vulture Workshop. Sessions with summarized results of scientific reviews on these topics.

Theodora Skartsi: The most safe way is the scientific way. If there are publications, someone could be in charge of evaluating these before the meeting. Every proposal must have a scientific background. Results are published.

6. Feeding network

Are we able have a sustainable feeding network. Can we establish new feeding sites when we can not operate the existing ones?

Priority: support existing feeding places

Juan José Sánchez Artés: Regarding feeding places: priority is to maintain existing ones but speaking of sustainability in times of lack of funds we should think about different possibilities. In France for example it is useful that NGOs enter agreements where persons of municipalities will maintain a feeding place and ensure that this activity is inside the law. The new regulation of the EU has this possibility to maintain private places for vultures.

Carlota Viada Sauleda: Local companies of food can give leftovers of meat. It is a way of getting donations, involve local people etc.

Adnan Djuliman: In Bosnia we are starting to build a feeding place and we found a company that is burying leftover meat. The remains from the butcher are going to the feeding place now without costs (it saves them money because they do not have to bury it anymore).

Michel Terrasse: To follow Juan and small feeding places. This technique is now completely accepted by EU regulations and is implemented in France. It may be different in your countries but there are guidelines on how these feeding places work. 4 or 5 big places remain (also for monitoring) but smaller feeding places are better for smaller scavengers. The other advantage of spreading smaller feeding places is ensuring natural foraging of the vultures (the foraging area is more than twice it was 7 years ago). It

reconstitutes the relationship between farmers and vultures. It is cheaper and the farmers are able to see them, appreciate them etc. If they organize this kind of feeding place they pay less than not to have this place.

Elena Kmetoca: We are slightly off topic. We are using now the supplementary feeding site and there are no Black vultures there. I do not know if it is because they are feeding in Greece or if the population is declining. It would be worth mentioning that there is a need to elaborate the network on information of who, how much, where there is feeding.

Ena Simic: To Adnan: the feeding site you want to construct is really near windmills (30-40 km).

Goran Susic: Our average productivity is about 36%. We increased feeding a lot! We decided to bring the food from local butchers (food that was meant for humans). Our productivity increased to 70%! So we can increase productivity. BUT: Now juveniles are falling from flight. We discovered that on farms for human production they add antibiotics. Now we decided to feed only sheep and donkeys that we have to buy. We could have food that is for free but we decided to provide healthy food that costs money.

There was a study about possible toxicology of food in Spain. They collected up to 175 different antibiotics in feeding sites. The quality of food is very important but also the use of feeding places.

In Macedonia there are two sites, one important in winter and one is important year round.

Some technical information about the new EU regulation:

Stoycho Stoychev: It is new, complicated but gives a very good opportunity for farmers to leave carcasses in their own field. Now this needs to be put into local legislation.

Alvaro Camiña Cardenal: It was approved on international level (for Natura2000 network). Authorities (veterinaries) decide where and how. Keep in mind: they are not conservationists. Destroying carcasses is a very big business. We must work on a National level on this problem. The Canary islands have a special implementation and they are very happy.

Without movement of trucks you save CO2. Vultures work in a perfect way in saving greenhouse gas. It is something to take into account when lobbying.

Somebody needs to make a list and to have a picture with information (food provided etc) of feeding sites in the BVAP. With these conclusions we can proceed.

Maniz, collected all data about the feeding sites but it is not complete. We can very kindly ask him with support of Alvaro to communicate with him and get together all the information.

Questionnaire in the mailing list to gather the information about these feeding places.

Mark Day has a constructive comment about the EV working group:

I have a question in relation to conservation outside Balkans. When we can identify migration routes, primary causes of death and primary locations, importance of those impacts can be found and if they are important we can discuss how to eliminate them.

7. Genetic issues

Black vultures:

Within the LIFE project in Dadia, a genetic study was carried out among the populations with scientists from Kaukasus and Spain (no samples from Turkey). Results were that there is evidence of historic isolation of Black vultures in Dadia, no inbreeding, no bottleneck and sex ratio 1-1. Interesting for the discussion is that the population should be managed as a separate unit. Kaukasus have sort of a migration where the juveniles move to Arabic region which is something to take into account.

More genetic studies must be done including Turkey. We have the opportunity to do this and it should be a priority. Because of BVAP meetings we found Mongolian centers and had the opportunity to expand the study. This is the result. If we can prove that there is a relation with the Turkish population we can start breeding in captivity in Bulgaria with vultures from Turkey or Greece.

Jovan Andevski: Then restocking can be done and we should find out if we can use Turkish population (and captive birds from there). If the scientific community advises to mix genetic lines we should go with this.

Bilgecan Şen: We have proposals for introduction of Turkish vultures to other countries. But it is very very difficult politically. Please keep in mind that reintroduction will not be easy because of bureaucracy.

Griffon vultures:

Michel Terrasse: For 5 years if not more, within the Griffon Vulture Working Group we discussed about the possible genetic pollution of Western birds released in Balkans. After genetic studies it was concluded that almost all the vultures inside this big habitat (from Pakistan to Gibraltar) are very variable in genetic composition. Because Griffons are very good travelers they were able to mix their genes for million years of existence. Therefore we passed this discussion and have used Spanish birds. For Bearded Vulture it was completely opposite. We try to create a flyway between Alpine population and Pyrenean one, which has a special genetic line. The idea is to reestablish a line which was cut many years ago and cut genetic isolation of groups. Of course we want to follow the advice of these guidelines.

(??) For Griffon Vulture we think it is not necessary or useful to take animals from the Spanish population. We think it is for few years we will have 1000 griffons in Serbia plus the Romania population. Because of continental climate griffons have a slow rate of reproduction. If we have poison in Herzegovina after a few years vultures are replaced. But in Serbia, 15 years after poisoning there still is no recovery. This is a problem. Spanish population are not like griffons from Balkan (morphometics).

Alvaro Camiña Cardenal: One of the Spanish birds I marked flew to Serbia by itself.

Goran Susic: Recent genetical studies found that Gyps fulvus from Croatia is a different species. For rest of the population we do not have enough information. When we started comparing genetics it was just a pilot, not a complete study. This needs to be done first. After, we can decide what to do.

Obviously we need more genetic studies about species, subspecies etc. In which way will we use the genetic results for our work. 1) we have genetical differences and isolation so we mix and make them stronger, 2) they are different and we should not mix them up. What are the international criteria (eg IUCN) how to handle this. A basic principle that needs to be decided.

Emilian Stoynov: I would like to answer Goran why we are already reintroducing? The population in Serbia could not have increased if we did not work so hard against poison. They did a reintroduction in Israel which supported somehow our work. We use this as a tool to increase awareness, make stepping stones, create habitats etc.

7. Reintroduction strategy

It is obvious that there are problems in Bosnia that need to be solved. Poaching is a problem. Political stability at this moment is a problem too. In two years it may be better. Please, let us organize a meeting in Bosnia to do an Action Plan for the country, guided by BVAP. Everything is divided into two, let's have a meeting to come to a common conclusion. Many of the discussion topics are related to already existing projects. We could not speak about monitoring and windfarms because we have no birds yet. It is more important to find out why we have no birds, instead of making a project of reintroduction.

(?) For the project in Bosnia we need support because it is political problem. When we started Croatia, Bosnia and Herzegovina it is good for the people. We want to start now with a project and in a few years we may have reintroduction? We should start things together. For reintroducing griffon is an ethology for people to make something together. People must be connected.

Opinion of the foundation is complicated when people on a national level do not agree.

There is an urgent need for cooperation Bosnia and Herzegovina. Then support of the region and internationally.

Q: Do we have any standards that have to be completed to get your support for reintroduction? At political level or anything like that.

A: There are standard protocols from IUCN. Feasability, historical analysis etc etc.

Mark Day: my understanding is that there will be an IUCN specialist group and their work will probably be updating the guidelines.

Alvaro Camiña Cardenal: Can we have a proposal? We do not know about your idea so we do not know if we want to support. Please share and we will discuss.

Wolfgang Fremuth: it would be nice if Serbia and Bosnia can get together to produce something. This would be a perfect idea.

About the Serbia conflict

When I look around, there are at least four or five 'couples' where people do not speak with each other. Why not use the opportunity now to speak together??!!! If you do not do it in these kind of circles we will never do it.

8. Improve involvement of rehabilitation centres

Theodora Skartsi: We should involve the rehabilitation centres in the Balkans to collaborate with the reintroduction projects. They may not know about these project or they may not understand the value. I suppose there is a network for this recovery centres? Let's involve them. As far as I know there was communication in the past with the centre in Greece but somehow it was lost.

9. The objective of BVAP is to do capacity-building in the countries

Wolfgang: we have a big difference between countries. Albania for example is weak. It would be wonderful if we can organize horizontally the experience that was built up. Bosnia and Serbia are starting cooperation now and this is wonderful.

10. Lobby for status of Griffon vultures in EU

Norbert Schaffer: The analysis of status of birds is done by birdlife based on scientific research, there is nothing you can do about this. Then there is the EU, which takes the whole union as one unit. This means if in one country the status is good enough the bird will not be listed as threatened. The only thing we can lobby for is subspecies. For money and status subspecies will be considered as a species.

In the bird directive there are regional decisions to hunt (or not to hunt). Why can Birdlife not lobby for a special project for griffons in LIFE+ because now they are not a priority species. Also other networks could pressure this a bit.

There are species that are endangered and when the EU is extended suddenly they are common. Taskforce Birdlife tried to lobby for this but as far as I know there is no progress. Let's write to birdlife asking to look at the situation and be aware that it is not satisfactory.

Carlota Viada Sauleda: Let us not look at a species but look at a strategy to present the need to recover and preserve biodiversity in the Balkan area.

Thank you for constructive discussions. We were quick, and did not get into detail.

We can have a network in the Balkan here with BVAP. There was a Eastern Mediterranean Griffon Working Group. They cover many countries. Without the Working group we are not in contact at all. Without somewhere to target a question we cannot work. We should continue in this name or another. I do not want to loose this opportunity.

Short speech of Michel Terrasse:

I would like to just tell a little bit about the idea at the beginning. 40 pairs remained. We started reintroduction in one place, succeeded and started immediately with another. It gave us the opportunity to connect the French ones to the ones in Spain. We organized a meeting to discuss where we can put birds. Some populations in Italy remained, big poisoning event in 1992 removed all the northern colony. In Sicily, Calabria, Abruzzo etc projects were started to reconstitute movements. It could be perfect but Italian people are impossible to organize themselves and most of the projects failed. The vultures were everywhere, now some birds remain along the sea and it would be nice to reconstitute them. With this design we will accomplish something incredible. Greece pop could be fed by pop from the north.

All this just to share my thought and background for this reintroduction that is really ambitious. I hope we will work together on this in a situation without poison (I hope) and a successful recovery of all vultures in Europe.

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Elena Kmetova: It had been a pleasure to be here, it was an impressive two days. I hope you had time to talk because for me the network was just as important as the presentation. Thank you all that helped in organizations, you are welcome to visit other release sites and lets keep collaborating.

Thematic presentations: top objective in evaluation was fundraising. From the discussion yesterday we saw that windmills is important too. This is the reason we decided to have give topics extra attention. Presentations will be available from…

No questions about fundraising

Questions about windfarm presentation:

Stoycho Stoychev: The windfarm issue is a big issue in Bulgaria and it is in other countries. It will become more serious and I think everyone will face the same problems. I would like to share some experience from the Balkan region. We cooperate with windfarm developers. In general I do not support in this kind of cooperation. They build and afterwards they ask for help. We want to be there before the areas are selected. Planning should start in the very beginning and windmills should be discarded from some areas. Winfarm developers say they do EIAs but we think we should have no-go areas. In Bulgaria there is a document for renewable energy which needs to be accepted by the government. Windfarm developers propose more than we can consume. If the process is starting now in Serbia you should be on top of it now!! We should have a sensitivity map which you can use to plead for your case.

Alvaro Camiña Cardenal: I know about the situation in Balkans because I work in Montenegro where the developer is forced to do an assessment. So you are right, but take into account that in Spain we have many more than were planned. They split protection areas to make a corridor for windmills. This happened in Spain. We should approach as much as possible, be there as early as possible. We should work with them as much as possible.

Gordana: The wind farm development is a big issue now in Croatia and we are cooperating with Slovenia. They are planning projects very near the colonies and every local municipality wants them. EIA are written by well paid ornithologists that will write in favour of windfarms. Also, everyone can write an EIA study. The only thing they do is to count birds. Excluding an area is not an option in Croatia.

We should have a common methodology how to monitor and how to do EIA in order to deal with governments.

Norbert Schaffer: It is not only the wind turbines but also the wires going over the hills. Also, there is a big discussion about windfarms going on eg in Germany that we need other kinds of energy storage. We need water reservoirs connected to water power installations. When you have many windfarms you need places to store this energy. A very tricky situation.

We have to form a group to have advice on pre-assessment. Identify who are the developers. Eg if a company goes a wrong way we should write a press release pointing out their case.

Rigas Tsiakiris: EIA is difficult because they cannot assess the area now there are no griffons. If it would be done 20 years ago the situation should be different. SPA's are not designed for raptor and vulture conservation. We have no migration maps. You go 2 days in spring and 2 days in autumn, but the flock will pass the day you are not there. Who is the ornithologist? We have no university giving such a degree. There is no sign that you are doing the work properly. Then, as a society makes a map and designs areas important to the species that are known. We excluded 20% of the Greek land. There is sufficient land left for windmills.

To conclude: there is no one inside authorities who can assess if EIA are ok or not. There are people assessing that are also members in the wind turbine industry.

How do you think this development will affect BVAP? In my opinion it will be a disaster after the effort of all these years. We have to start working now!

Can we ask for an international environmental impact assessment?

There should be more pressure against the EU guidelines for windmills. Birdlife have collected more data. Some partners say stay away from natura2000, other partners say it is a case by case business. These no go areas, although they sound attractive there are a few hiccups. Natura2000 is designated because of what there currently is. In the future there will be problems with areas where vultures are not yet. Case by case solutions are the best.

Emilian Stoynov: I would like to stress the case with the … turbine. But in Bulgaria they have built some of these turbines. We should pay attention to new technology and if they are pressed from the conservation community they may want to invest in this

development if it is a solution. There is a presentation explaining these turbines. We should discuss the possibility.

Michel Terrasse: To Alvaro: What was the conclusion after the important conference in Norway that you went to?

Alvaro Camiña Cardenal: Case by case analysis. Business will always be business and will not stop development. Government is in favour of the development so we should cope with this.

What about the displacement, especially for species like eagle and Egyptian Vulture that are sensitive to this? How can a case by case assessment without this data effectively promote a viable population?

Alvaro Camiña Cardenal: we have to start as soon as possible. Working with golden eagles, some birds are colliding some birds are not. There even are successful nests very close to the turbines. We cannot make a guideline for distance to the turbines. We need to do good analysis!

Norbert Schaffer: case by case studies. The big issue in Germany is land use is changing for renewable energy (like mais for biogas). So by banning something we may encourage something worse.

Stoycho Stoychev: One practical advise: if there is a project coming and it is a sensitive area do not propose to do studies. If developers invest they will keep fighting until they have something.

Theodora Skartsi: Assessing is difficult. So if we cannot go before let's try to make them reconstruct their farms. (or preconstruction?)

(?) I am a bit emotional. I was expecting people would be more reactive against windfarms. Is it necessary to have a position paper of BVAP to say not to have windfarms in certain areas.

Alvaro Camiña Cardenal: VCF has a general statement. But we need to get into case by case advices. Without considering the variables you cannot have a position.

We cannot avoid development of windfarms.

Wolfgang Fremuth: An important issue for BVAP is to identify sensitive and critical areas which can be declared as no go areas. Then we have a document in our hands to work on local level lobbying etc. Then even a study would be worthwhile to follow up.

Why don't we launch the zero-emission issue. To deal with carcasses for free the gas emission that we save can lower windmills. How many windmills do we built to deal with carcasses at the moment? Publicity!!! Vultures reduce emissions. So let's say: 20 vultures or 2 turbines. If we focus on an area for vultures and we compare we have an idea to lobby.

So in conclusion: a working group will be established.

Next steps, closing.

Jovan Andevski: Organizing and preparing this meeting was hard and complicated work. I was expecting around 50 participants and around 20 turned up unregistered. This complicated things. But I am really happy with the high number of people that cams and I am glad that everyone is so interested in participating and establishing partnerships. Presentations will be distributed, proceedings will be available and the draft update of the action plan will be sent. The other thing is that we are planning to do a small publication. I asked for summary of presentations and data on monitoring and status. This also will be distributed widely.

The delay of this workshop was because of a lack of funds. The reason it could happen now was because of a grant from the Mohamed bin Zayed Species Conservation Fund. The remaining part of the workshop was covered by Frankfurt Zoological Society. Thank you for all the people that helped: Sandra, Irena Andreevska in not only moderating but also planning. Many thanks. Thanks to GreenBalkans. A great solution to have a local hosting organization helping with administrative parts. We also had a collaboration with Vratchansky National Park, hosting the opening and helping with organization.

Michel Terrasse: I have nothing to add. Again, thank you for the amazing work. To everyone: see you soon without any problems!

Annex IV:

Results from the Evaluation questionnaires

EVALUATION FORM – RESULTS

Important note by the moderator: *Out of 70 participants present at the WS, only 15 evaluation questionnaires were received. Was it because the WS was demanding until the very end, some of the people had to leave earlier, some were tired or simply was it because of the organizational mistake to distribute the questionnaires at the very beginning (the papers were included in the folders) so some of the participants forget them in their rooms or simply lost them?*

So, despite the fact that most of the answers given here are very positive, this evaluation can not give the whole picture. However, the organizers should consider the feed back very seriously, especially the part where written recommendations were left by the participants! Those should be incorporated as constructive support to the future actions!

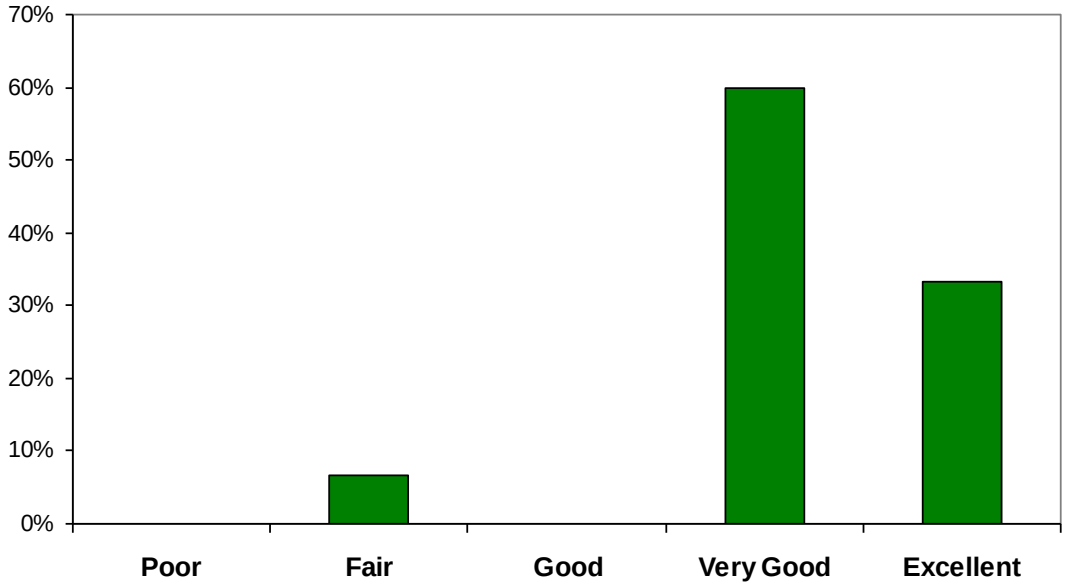
I. General Information

	Poor	Fair	Good	Very Good	Excellent
Logistics (Organizaton)	% = 6,66;	6,66;	26,6;	40;	20
Working Conditions	% = - ;	- ;	20;	53,3;	26,6
Accomodation	% = - ;	- ;	46,6;	13,3;	40
Food	% = 6,66;	6,66;	33,3;	33,3;	20

II. Program

Session I – Country presentations

In how far did the presentations provide you with general overview into the situation with the recovery and conservation of the Vultures in the Region?



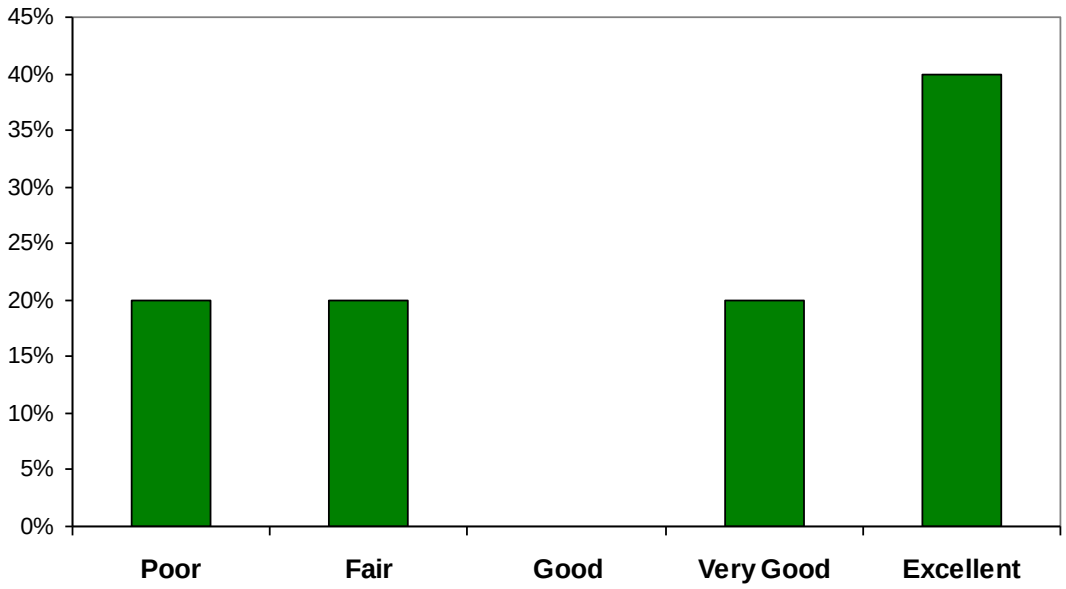
Session II – BVAP Assessment, defining mid-term Action Plan

In how far are you satisfied with your personal contribution during the discussion and approving of the draft AP?

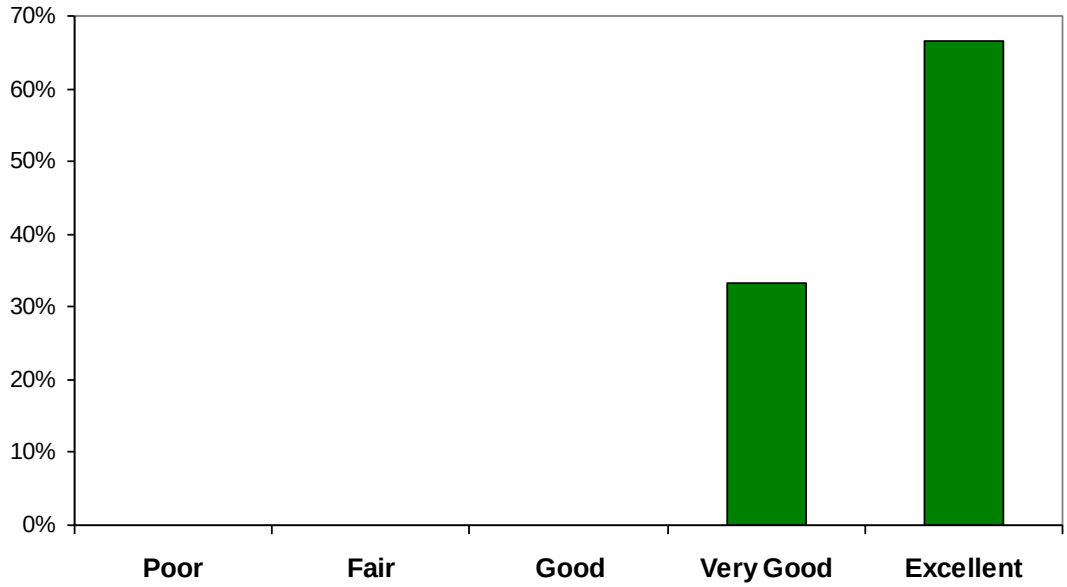
Session III – Thematic topics

How relevant were the thematic topics to your work?

"Providing funds for Vulture conservation: How to become more effective raising funds for the BVAP"



"Impact of Wind-farms and conservation"

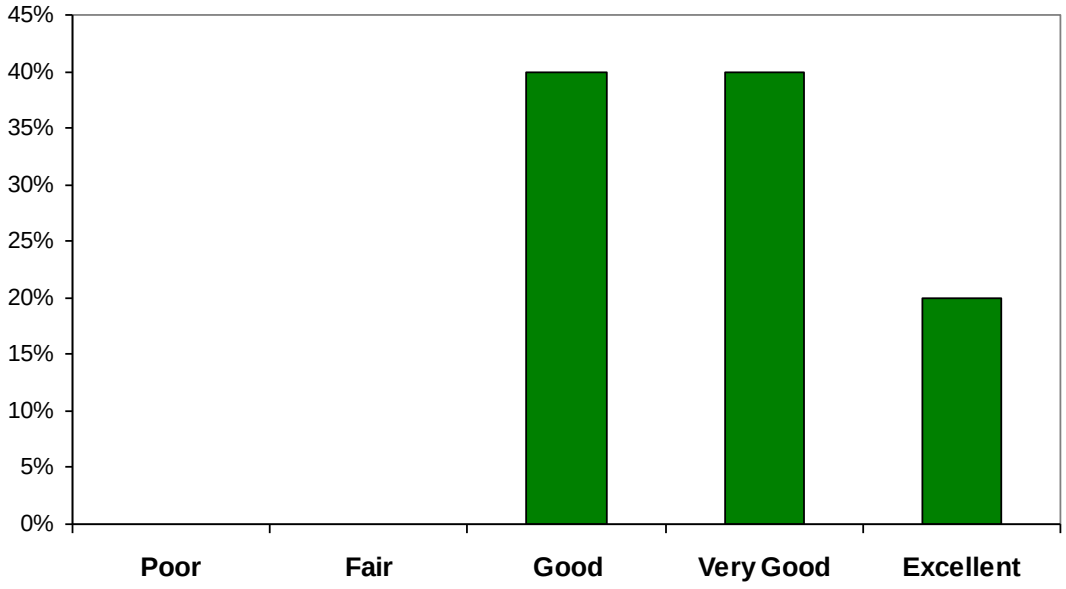


III. Metodology

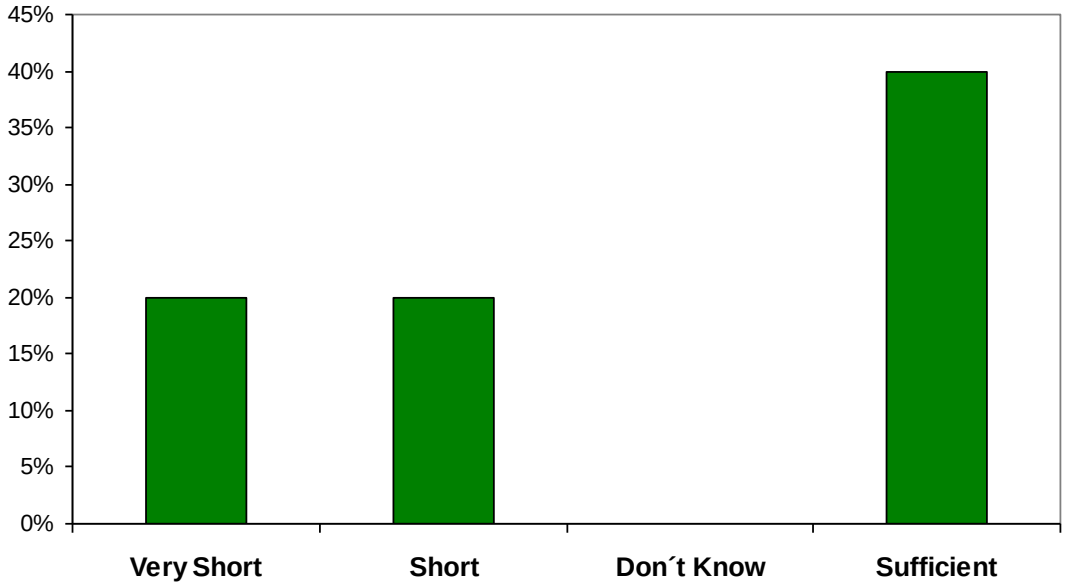
Methodology of the WS and efficiency

Quality of the information/input provided before the WS

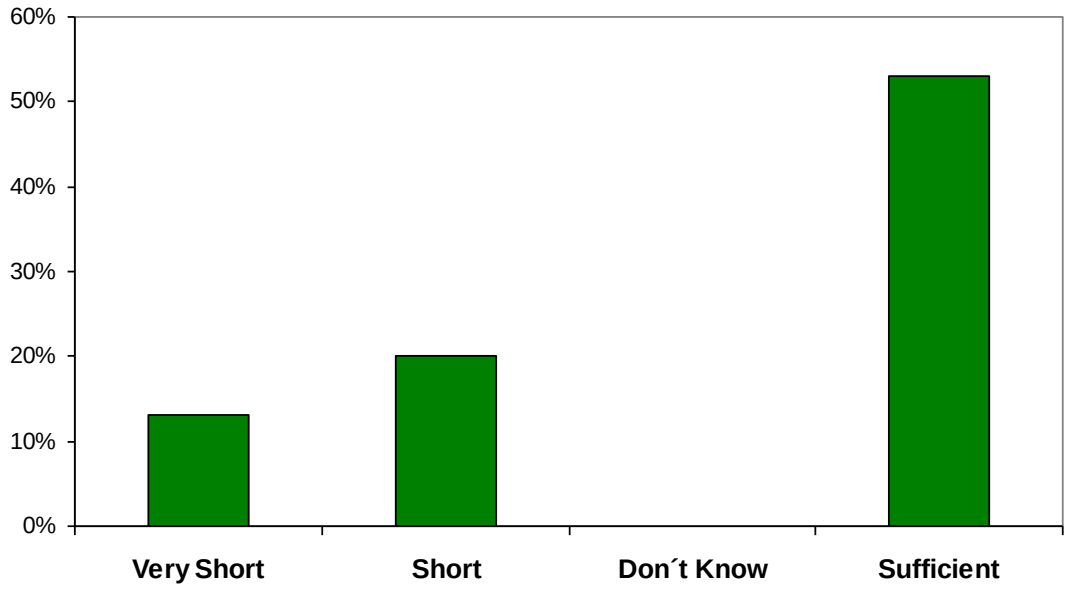
Quality of the material provided during the WS (1 without answer)



Overall timeframe of the WS (2 without answer)

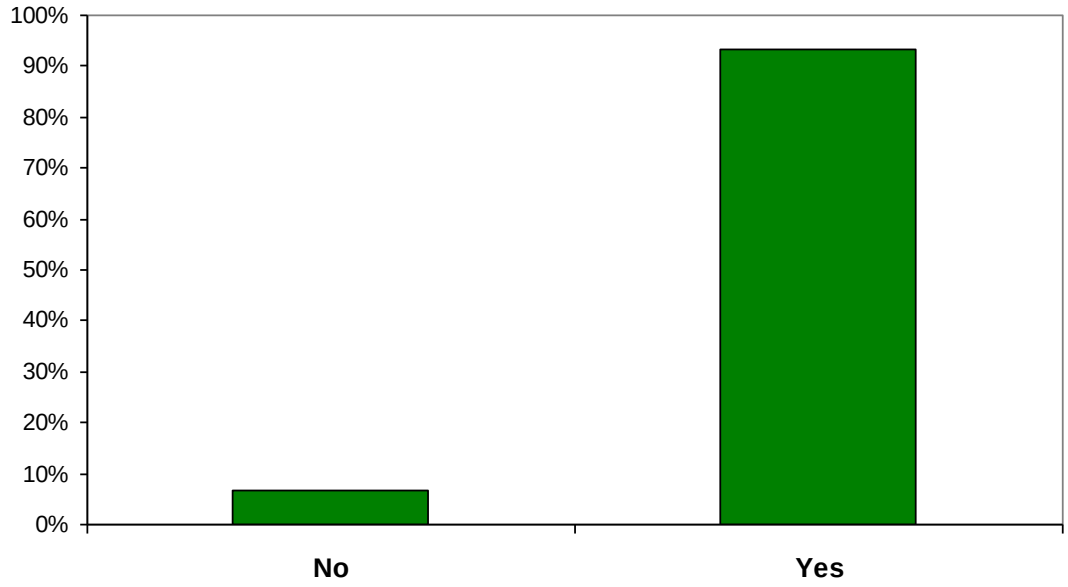


Time sequnces of the WS sessions (2 without answer)



IV. General goal of the WS: to define priorities for the next three years – create mid-term Action Plan for the recovery and conservation of the Balkan Vultures

Do you believe that the General goal of the WS was reached?



If not, please provide an explanation:

- *The general goal of the WS was reached but shall some topics remain a problem and still some members' opinion are excluded*

- *WS should have been concluded with agreements for future partnership of Balkan countries, and strict guidelines for countries doing reintroduction*

What additional topic/s are of interest for you/your organization within the framework of projects related to recovery and conservation of the Vultures?

- *Have good cooperation with local interest groups (hunters/farmers) in jointly dealing with their problems (predator control) and listening to their problems. Giving them assurance that we are dealing with their problem as well (relation on the ground)*

- *Genetic studies of Griffon Vultures, populations, especially between the Balkan and the Spanish populations*

- *Very few attention was payed to the Egyptian Vulture. Anyway, there will be a specific EV meeting, but still we should have payed more attention and give priority to EV's conservation*

- *Start more conservation projects for Vultures in Greece*

- *Poisoning control, windmill control*

- *The work in Africa and middle East*

What did you appreciate most in the WS?

- *The moderators work!!!*

- *Contacts to colleagues; Workshop facilitation*

- *To meet colleagues, opportunity to discuss, to exchange experiences*

- *The variety of opinions and problems arising from different countries and that some of these problems can be solved by listening to the experiences of other countries*

- *Opportunity to discuss about some major issues about reintroduction strategy*

- *Getting back together & exchanging information*

- *The good will of the people to collaborate and the efforts of Jovan and Irena to facilitate the WS*

- *Participants contribution the first day*

- *Opportunity to say our observations and our needs*

- *Getting together again and updating each other on the BVAP progress*

- *The discussions*

What should be improved next time?

- *Evaluation of the implementation of the overall BVAP before the nextmeeting;*
  The presentations of each project within the meeting days cannot give a clear idea of the overall evaluation

- *Organization, at least one week before all arrivals and departures should be solved, bus and train schedules sent*

- *More time for discussion, especially for critical issues*

- *For haven's shake once do it outside the breeding season!!!*

- *Perhaps also, short texts beforehand instead of presentations, so more discussion time*

- *Next time should be improved the time frame and to give more time to the participants to speak*

- *Timing, Methodology and efficiency*

- *Better communications, much more time for discussions*

- *Timing, out of the field season*

- *More time is needed for discussing the different topics, especially the most urgent ones*

Other comments?

- *BVAP should pay attention to the coordination work during the implementation and not only during the 3 or 5 years meetings*

- *Considering the circumstances, overally excellent job, Thanks!!!!*

- *Well, almost no commitment from VCF for the funding issues, no taking of responsibility*

- *Thanks a lot the organizers*

- *More implementing of molecular biology in projects*

ANNEX V

SUMMARISED RESULTS OF THE PRE-ASSESSMENT QUESTIONNARIE
(the objectives are listed by the rate of relevance)

Legend:

Urgency	Status
1: not necessary 2: essential on long-term (more than 5 years) 3: essential on short-term (within 3 years) 4: urgent	1: not initiated 2: ongoing 3: finished 4: terminated before finishing

- **Objective:** Raise enough funds to make the project viable in long-term perspective

Relevance: Irrelevant **0.00%** Relevant **100.00%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Design and implement a fundraising system or plan	0.00%	28.13%	12.50%	59.38%	68.75%	28.13%	0.00%	3.13%
2. Find sponsors and private donors	0.00%	18.75%	28.13%	53.13%	56.25%	40.63%	0.00%	3.13%
3. Find public sources for financial support such as EU (LIFE and other sources)	0.00%	25.00%	21.88%	53.13%	37.50%	56.25%	3.13%	3.13%
4. Approach the identified potential funding sources of the list of the II BVAP workshop	9.38%	28.13%	21.88%	40.63%	56.25%	43.75%	0.00%	0.00%
5. Create a steering council to lobby for a big BVAP project	3.13%	34.38%	25.00%	37.50%	81.25%	15.63%	0.00%	3.13%
6. Employ fund raising officer	18.75%	28.13%	37.50%	15.63%	84.38%	12.50%	0.00%	3.13%

• **Objective:** Improve the monitoring activities
Relevance: Irrelevant **0.00%** Relevant **100.00%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Give guidelines for scientific monitoring the breeding pairs of each species, achieving the needed data to know productivity and breeding success and implement it at all vulture breeding sites.	6.25%	34.38%	21.88%	37.50%	18.75%	71.88%	9.38%	0.00%
2. Design a monitoring programme for the released vultures.	21.88%	31.25%	15.63%	31.25%	43.75%	40.63%	15.63%	0.00%
3. Design an internet database for cooperation and to inform about the vulture status	3.13%	53.13%	28.13%	15.63%	84.38%	12.50%	0.00%	3.13%
4. BVAP Seminar on ringing and monitoring	12.50%	40.63%	37.50%	9.38%	81.25%	18.75%	0.00%	0.00%
5. Ringing of vultures for monitoring of movements	3.13%	28.13%	31.25%	37.50%	43.75%	53.13%	3.13%	0.00%
6. Satellite tracking of the Egyptian Vulture migration	9.38%	28.13%	9.38%	53.13%	56.25%	43.75%	0.00%	0.00%

• **Objective:** The scientific community stays informed
Relevance: Irrelevant **0.00%** Relevant **100.00%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Prepare planning and guidelines for the publication of studies, project results and action plans of the BVAP.	3.13%	53.13%	31.25%	12.50%	78.13%	18.75%	3.13%	0.00%
2. Publish project results according to the BVAP publication guidelines.	15.63%	37.50%	28.13%	18.75%	84.38%	12.50%	0.00%	3.13%
3. Publish the workshop proceedings.	3.13%	37.50%	37.50%	21.88%	68.75%	28.13%	3.13%	0.00%
4. Presentation of BVAP results on scientific congresses.	0.00%	56.25%	28.13%	15.63%	56.25%	40.63%	3.13%	0.00%
5. Create a scientific committee for publications	15.63%	43.75%	21.88%	18.75%	93.75%	3.13%	3.13%	0.00%

• **Objective:** Stop poisoning in the natural environment
Relevance: Irrelevant **3.13%** Relevant **96.88%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Raise public awareness on the problem in general to increase understanding.	0.00%	25.00%	15.63%	59.38%	21.88%	75.00%	3.13%	0.00%
2.Raise awareness among target groups e.g. hunter assoc. sheep-keeper etc to increase understanding and support.	3.13%	28.13%	9.38%	59.38%	21.88%	75.00%	0.00%	3.13%
3. Train and instruct public services in handling problems with poison to improve knowledge, procedures and dissuasions.	3.13%	28.13%	18.75%	50.00%	25.00%	62.50%	6.25%	6.25%
4. Improve legal system of the country for better control of hazardous substances and reflection of poisoning as a crime in the law.	15.63%	18.75%	6.25%	59.38%	53.13%	40.63%	6.25%	0.00%
5. Improve the detection of poisoning cases.	0.00%	31.25%	25.00%	43.75%	31.25%	68.75%	0.00%	0.00%
6. Improve the livestock defence systems against predator attacks to reduce human-wildlife conflicts.	12.50%	34.38%	21.88%	31.25%	25.00%	62.50%	3.13%	9.38%
7. Improve the compensation systems for livestock losses caused by predators to reduce conflicts and increase support.	15.63%	43.75%	3.13%	37.50%	37.50%	59.38%	0.00%	3.13%

• **Objective:** Improve communication and cooperation
Relevance: Irrelevant **3.13%** Relevant **96.88%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Prepare Memorandum of Understanding	28.13%	25.00%	21.88%	25.00%	46.88%	31.25%	18.75%	3.13%
2. Update of activities on web page www.balkanvultures.net.	0.00%	50.00%	34.38%	15.63%	40.63%	59.38%	0.00%	0.00%
3. Maintenance of the "balkanvultures" e-mail discussion group	9.38%	56.25%	21.88%	12.50%	37.50%	59.38%	0.00%	3.13%
4. Preparation of communication strategy of the BVAP promoting common principles and goals.	6.25%	56.25%	21.88%	15.63%	68.75%	31.25%	0.00%	0.00%

5. Preparation of common materials (leaflets, t-shirts, video, sticker etc.) to promote BVAP.	18.75%	40.63%	31.25%	9.38%	56.25%	40.63%	3.13%	0.00%
6. Regular meetings of the Egyptian vulture working group	6.25%	25.00%	34.38%	34.38%	65.63%	34.38%	0.00%	0.00%
7. Every three years a BVAP workshop for all participants to update the BVAP.	9.38%	37.50%	31.25%	21.88%	34.38%	62.50%	0.00%	3.13%

• **Objective:** Conserve breeding and feeding habitat in present and possible future vulture areas.
Relevance: Irrelevant **3.13%** Relevant **96.88%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. Contribute to the establishment of a network of protected areas in vulture habitat (e.g. new SPAs, IBAs) taking into account a future participation in "Natura 2000" of the EU.	6.25%	43.75%	25.00%	25.00%	15.63%	68.75%	15.63%	0.00%
2. Promote establishment and implementation of management plans for private and public properties respecting the needs of vultures and nature conservation in general.	6.25%	50.00%	28.13%	15.63%	59.38%	37.50%	3.13%	0.00%

• **Objective:** Create and implement National or regional Species Action Plans
Relevance: Irrelevant **6.25%** Relevant **93.75%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. Griffon Vulture Action Plan is available by the EGVWG, its implementation on the Balkan is taken into account.	6.25%	37.50%	40.63%	15.63%	28.13%	68.75%	3.13%	0.00%
2. Establish a Balkan wide Egyptian Vulture Action Plan.	3.13%	18.75%	15.63%	62.50%	62.50%	31.25%	0.00%	6.25%
3. Establish and implement Black Vulture and Bearded Vulture Action Plan, in coherence with the International Action Plans of BirdLife.	6.25%	34.38%	28.13%	31.25%	71.88%	25.00%	0.00%	3.13%

• **Objective:** Enlargement and maintenance of a legalized network of feeding places to guarantee food availability and reduce poisoning.
Relevance: Irrelevant **6.25%** Relevant **93.75%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Study on the legislation situation concerning dead livestock in nature.	3.13%	37.50%	31.25%	28.13%	34.38%	56.25%	9.38%	0.00%
2. Achieve the legalization of a standard model of feeding place.	3.13%	40.63%	18.75%	37.50%	43.75%	50.00%	6.25%	0.00%
3. Identification of areas, where more feeding places are needed or convenient to complete the feeding place network for the increase of vulture populations.	18.75%	31.25%	25.00%	25.00%	40.63%	31.25%	25.00%	3.13%
4. Identify the suitable sites for feeding places in these areas.	12.50%	34.38%	21.88%	31.25%	31.25%	50.00%	15.63%	3.13%
5. Assure the sources for carcasses, creating a system to obtain the food regularly, assuring also the quality of food (no poultry, variety).	6.25%	43.75%	18.75%	31.25%	34.38%	59.38%	6.25%	0.00%
6. Organize vulture feeding places managed self-sustainable by local farmers.	3.13%	62.50%	15.63%	18.75%	71.88%	25.00%	3.13%	0.00%
7. Make a common monitoring system available for the feeding place network.	9.38%	40.63%	31.25%	18.75%	62.50%	34.38%	3.13%	0.00%

• **Objective:** Improve the general understanding of vultures in their ecosystems
Relevance: Irrelevant **6.25%** Relevant **93.75%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Prepare general information material on the BVAP in local languages and distribute it among the general public.	6.25%	40.63%	34.38%	18.75%	46.88%	46.88%	3.13%	3.13%
2. Prepare specific material as against the use of poison, for reintroductions etc.	6.25%	40.63%	25.00%	28.13%	40.63%	46.88%	9.38%	3.13%
3. Coordinate the edition of materials so that they can be used in a	12.50%	40.63%	25.00%	21.88%	62.50%	31.25%	6.25%	0.00%

large area by only changing the language and decrease printing costs.								
4. Use of the BVAP logo on all materials and products	21.88%	43.75%	15.63%	18.75%	50.00%	46.88%	3.13%	0.00%

• **Objective:** Improve the natural food availability for vultures
Relevance: Irrelevant **6.25%** Relevant **93.75%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. Study natural food availability and identify areas with lack of natural food.	12.50%	40.63%	34.38%	12.50%	34.38%	50.00%	15.63%	0.00%
2. Provide guidelines for food availability studies.	28.13%	40.63%	21.88%	9.38%	53.13%	28.13%	18.75%	0.00%
3. Support the conservation actions and re-introduction of the Balkan chamois.	15.63%	46.88%	18.75%	18.75%	59.38%	31.25%	6.25%	3.13%
4. Promote recovery of transhumance and sheep keeping in mountainous areas.	12.50%	59.38%	15.63%	12.50%	40.63%	53.13%	3.13%	3.13%
5. Promote traditional animal husbandry in the home range of the vulture species.	9.38%	59.38%	15.63%	15.63%	43.75%	53.13%	0.00%	3.13%
6. Support and promote the relationship between extensive livestock keeping and ecosystem conservation/landscape maintenance e.g. in protected areas.	9.38%	53.13%	21.88%	15.63%	53.13%	40.63%	3.13%	3.13%

• **Objective:** Improve knowledge about the status of vultures.
Relevance: Irrelevant **9.38%** Relevant **90.63%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. Survey of status and distribution of vultures	15.63%	46.88%	15.63%	21.88%	3.13%	75.00%	21.88%	0.00%
2.Establishment of contacts with possible project partners.	12.50%	46.88%	21.88%	18.75%	3.13%	87.50%	9.38%	0.00%
3. Revision of the action plan with those partners.	3.13%	50.00%	15.63%	31.25%	50.00%	43.75%	6.25%	0.00%

• **Objective:** Increase participation of stakeholders and create strategic alliances.
Relevance: Irrelevant **9.38%** Relevant **90.63%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Identify stakeholders to be involved in the BVAP.	3.13%	40.63%	37.50%	18.75%	40.63%	53.13%	6.25%	0.00%
2. Promote the involvement and participation of stakeholders like hunter or sheep-keeper associations, forestry and veterinary service.	0.00%	37.50%	34.38%	28.13%	37.50%	56.25%	3.13%	3.13%

• **Objective:** Reintroduction of vultures where they are extinct and conditions are favourable again and restocking programmes where remnant populations still exist.
Relevance: Irrelevant **15.63%** Relevant **84.38%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Design a Balkan Restocking and Reintroduction Strategy.	12.50%	31.25%	18.75%	37.50%	50.00%	46.88%	3.13%	0.00%
2. Prepare feasibility studies for restocking and reintroduction projects.	21.88%	37.50%	12.50%	28.13%	40.63%	43.75%	15.63%	0.00%
3. Provide guidelines for the reintroduction techniques and methodologies to the local responsible in charge of the project.	18.75%	34.38%	9.38%	37.50%	59.38%	31.25%	9.38%	0.00%
4. Visit release sites and decides on release projects, depending also on the viability study and priorities within the reintroduction strategy.	21.88%	31.25%	21.88%	25.00%	40.63%	50.00%	9.38%	0.00%
5. Create a reintroduction-working group with all organizations in charge of a reintroduction, hold meetings and maintain correspondence for information and experience exchange.	18.75%	34.38%	12.50%	34.38%	50.00%	46.88%	3.13%	0.00%
6. Prepare for each release site a complete release programme.	25.00%	28.13%	21.88%	25.00%	59.38%	34.38%	6.25%	0.00%
7. Organize BVAP seminars and practices for the participants of	15.63%	40.63%	28.13%	15.63%	62.50%	31.25%	3.13%	3.13%

BVAP reintroduction projects.								
8. Carry out all needed preparatory actions before starting the releases.	18.75%	31.25%	21.88%	28.13%	56.25%	31.25%	9.38%	3.13%
9. Start the release phases of the reintroduction projects in a coordinated and cooperative way and following the guidelines.	21.88%	34.38%	15.63%	28.13%	62.50%	28.13%	6.25%	3.13%

• **Objective:** Improve the BVAP administration, management and coordination
Relevance: Irrelevant **15.63%** Relevant **84.38%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. A specific team for the BVAP with its own office equipment is able to implement the increasing administrative tasks.	18.75%	40.63%	28.13%	12.50%	78.13%	18.75%	3.13%	0.00%
2. Analyze the annual project proposals of the BVAP for their integration in the objectives of this framework, assist the applicants in adaptations and improvements for approval.	12.50%	34.38%	34.38%	18.75%	68.75%	25.00%	3.13%	3.13%
3. Distribute the available funds and give continuity to long-term activities.	15.63%	31.25%	21.88%	31.25%	59.38%	34.38%	3.13%	3.13%
4. Analyze the annual reports of the projects and assist in the presentation of the results where necessary.	18.75%	37.50%	25.00%	18.75%	56.25%	34.38%	3.13%	6.25%
5. Increase the capacity of the local participants in presenting project applications and reporting.	15.63%	37.50%	25.00%	21.88%	59.38%	34.38%	3.13%	3.13%
6.Identify groups or individuals ready to undertake the studies and preparative documents indicated in this framework	15.63%	31.25%	25.00%	28.13%	59.38%	37.50%	0.00%	3.13%
7. Distribute the actions of this framework, which have not yet started, among the local participants or search for new participants.	18.75%	40.63%	25.00%	15.63%	62.50%	31.25%	3.13%	3.13%
8. Visits of the local projects by the coordinators or specialists.	12.50%	40.63%	21.88%	25.00%	56.25%	31.25%	3.13%	9.38%

• **Objective:** The BVAP is a motor of socio-economic development
Relevance: Irrelevant **15.63%** Relevant **84.38%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Identify examples of ecotourism, in relation with vulture (Spain, Mallorca, France) and evaluate them.	9.38%	40.63%	40.63%	9.38%	43.75%	46.88%	9.38%	0.00%
2. Develop an ecotourism pilot plan for a few already prepared sites.	9.38%	43.75%	43.75%	3.13%	56.25%	34.38%	9.38%	0.00%
3. Start an ecotourism pilot project following the pilot plan.	6.25%	53.13%	37.50%	3.13%	65.63%	28.13%	6.25%	0.00%
4. Develop commercial strategies for selling the transhumance and other local agricultural products.	6.25%	50.00%	34.38%	9.38%	53.13%	43.75%	3.13%	0.00%
5. Create a quality sign for these products and achieve it to be recognized.	9.38%	56.25%	25.00%	9.38%	71.88%	25.00%	3.13%	0.00%
6. Develop a strategy for sustainable development in vulture regions, and start a pilot project.	9.38%	40.63%	21.88%	28.13%	71.88%	21.88%	6.25%	0.00%
7. Design a socio-economic development plan each BVAP country, based on the example of the pilot projects and adapted to each region	18.75%	50.00%	18.75%	12.50%	81.25%	15.63%	3.13%	0.00%
8. Carry out the Socio-economic development plan in the participating BVAP countries	9.38%	71.88%	9.38%	9.38%	78.13%	18.75%	3.13%	0.00%

• **Objective:** Stop direct persecution
Relevance: Irrelevant **15.63%** Relevant **84.38%**

Action:	Urgency				Status			
	1	2	3	4	1	2	3	4
1. Work on the awareness of hunters in the vulture regions	12.50%	34.38%	28.13%	25.00%	34.38%	53.13%	9.38%	3.13%

• **Objective:** Obtain captive bred vultures and birds from recovery centres to be released into nature
Relevance: Irrelevant **21.88%** Relevant **78.13%**

Action:	**Urgency**				**Status**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1. Identify the needs for captive bred birds in nr. of individuals per year.	31.25%	40.63%	9.38%	18.75%	53.13%	34.38%	6.25%	6.25%
2.Analyze the situation of captive breeding networks (EEP, ESB) for each vulture species and their capacity to make young vultures available for release.	25.00%	43.75%	9.38%	21.88%	62.50%	28.13%	3.13%	6.25%
3.Support and improve the captive breeding networks.	21.88%	40.63%	12.50%	25.00%	53.13%	37.50%	3.13%	6.25%
4. Amplify the cooperation with Spanish recovery centres and autonomous communities to obtain the needed releasable birds.	31.25%	31.25%	12.50%	25.00%	46.88%	43.75%	0.00%	9.38%
5.Amplify the cooperation with French recovery centres in the same way.	37.50%	28.13%	9.38%	25.00%	65.63%	25.00%	0.00%	9.38%

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

Action Plan and National Strategy for Restoration of the Nesting Population of the Bearded Vulture in Bulgaria

DRAFT

Bulgaria - September 2001

Photographer: © Lutz Luecker

The plan has been elaborated by Green Balkans and discussed by the Bearded Vulture Working Group at a national working meeting, with the financial support of DANCEE and REC

DANCEE
Danish Cooperation for Environment in Eastern Europe
Ministry of Environment and Energy

Action Plan and National Strategy for Restoration of the Nesting Population of the Bearded Vulture in Bulgaria

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Bulgaria – September 2001

National Working Group for the Conservation and Reintroduction of the Bearded Vulture In Bulgaria

Green Balkans Federation of Nature Conservation NGOs

'Le Balkan' Bulgaria Foundation

Ministry of Environment and Waters

Wildlife Rehabilitation and Breeding Centre

'Central Balkan' National Park – Gabrovo

'Sinite Kamani' Nature Park – Sliven

'Russenski lom' Nature Park

Regional Inspectorate of Environment and Waters – Haskovo

Regional Inspectorate of Environment and Waters – Stara Zagora

Regional Inspectorate of Environment and Waters – Veliko Turnovo

Bulgarian Swiss Programme for the Conservation of Biodiversity – Bourgas Wetlands Project

Sofia Zoo

Regional Veterinary Medicine Service – State Veterinary Sanitation Control – Stara Zagora;

'Balkani' Wildlife Society

Bulgarian Ornithological Centre

Society for the Protection of Raptor Birds – Sofia

'Axis' Veterinary Clinic

Plovdiv University

The present plan and strategy for reintroduction have been elaborated with reference to the requirements of the Convention on the Conservation of European Wildlife and Natural Habitats, as well as to the adopted National Strategy for protection of the environment and the guidelines of IUCN for reintroduction, adopted at the 41st meeting of the Council, May 1995. The plan is being implemented in pursuance of the "Biological Diversity Act" that is to be adopted.

The plan and the strategy for reintroduction must be reviewed and updated every 2 years.

Geographic scope – Bulgaria. This document can be used as a basis for the reintroduction and conservation of the species in its Balkan area of distribution.

Introductory information

Distribution and population:
The Bearded vulture is widely distributed in the mountain regions of Eurasia and Africa, and a small part of its world area is situated in Europe (Tucker and Heath 1994). There are obviously large populations in Eastern Africa, Central Asia and the Himalayas (del Hoyo *et al.*, 1994). The species is permanently residing in the whole area.

In Europe, the species could be found in Spain (the Pyrenees), Turkey, France (the Pyrenees and Corsica), Russia and Greece (Crete and the continental part). The European population comprises 167 nesting pairs, and 112 of them are in the EU. The Spanish population consists of more than 50 nesting pairs (this information dates back to 1996). After a serious decrease during the last two centuries that resulted in the extinction of the species in some 10 countries in Central and Southeastern Europe, now the European population is increasing in Spain, becoming stable in France and Russia, decreasing in Greece and probably in Turkey. The marginal population in Morocco is extremely threatened as it has suffered a sharp decrease. Since 1986, an initiative for reintroduction is being implemented in the Alps. As a result, more than 100 birds have been released and there have already been 6 breeding pairs. A project for reintroduction in the region of Andalusia, Southern Spain, has started recently.

Distribution in Bulgaria and the Balkan countries:
According to the published data, the species became extinct as a nesting one in Romania in 1935, in Czech Republic – 1942, Serbia and Montenegro – 1956, Bosnia and Herzegovina 1893, Macedonia - 1990 (Tucker and Heath). Possibly, there are isolated birds or nesting pairs in Albania and Bosnia and Herzegovina. Isolated birds could be found in the continental part of Greece, but there is no evidence of nesting for the last years. There are four nesting pairs on the island of Crete. In Macedonia, near the Greek border, there is a bird that is not nesting for certain.

In the past, the species was widely distributed in Rila, Balkan Mountains, Vitosha and the Rhodopes (Hristovich, 1894). In the 50s of the 20C the species became extinct in many habitats and was observed in Rila and the area Sinite Kamani (Patev, 1950). It is considered that the species has become extinct as a nesting one in Bulgaria in 1966. After that, there are many observations of isolated specimens. On 16.07.1968, in the vicinity of Ribni ezera (Boev 1985). In 1972, a specimen was found dead in the area Sinite Kamani (Donchev, 1974).On 20 October 1980, a young, sick Bearded vulture was found in Varnino village, district of Varna. During the same period a young specimen was observed in the area Bolata, near Kaliakra gore (Nonev 1982). During the last decade there have been sporadic observations in the eastern part of the country, mainly of young birds (by words of mouth – Hristo Hristov, Emiliyan Stoynov). There is also a published observation of a bird in a sub-adult plumage, on 7 March 1999, in the vicinity of Madzharovo, implemented by Emilyan Stoynov.

Biology of the species

Breeding

The Bearded vulture breeds in caves and on mountain cliffs at a height of 400-2000 m. It builds a solid nest of sticks and lays one or two eggs in the period late December – early March. Both adult birds take part in the incubation. In 54-58 days, in February or March, the youngsters hatch, and 112-119 days later, in June, they leave the nest. Although both youngsters may hatch, one of them usually dies as a result of aggression in the brood. One of the rare cases when both youngsters have grown up was in Ethiopia in 1996. The young birds stay in the same region until the beginning of the next breeding cycle in November (Heredia, 1990). They reach sexual maturity at about seven years of age or later (del Hoyo, 1994).

This bird is usually a monogamist. Polyandric triads (two males and a female) were found for the first time in the Pyrenees in 1979. Since then, the number of such cases has been increasing, in Corsica inclusive; triads occupied 14% of the nesting areas in the Pyrenees in 1996. The nesting results of the triads are similar to those of the pairs that have occupied the same territories before, as well as those of the neighboring pairs. The formation of triads has been explained with the irregular correlation of sexes, scant food availability, high nesting density or genetic connection between the male birds, but so far there is no evidence of the main factor (Donazar 1990, Fasce *et al* 1993). This phenomenon may have far-reaching effects for the conservation of the Bearded vulture.

Feeding

There is no data in Bulgaria for profound research on the feeding behavior of the Bearded vulture. Interesting fact is the observation of broken tortoise shells in the cliffs, as with the Golden eagle. Presumably, in many regions of the country, where the tortoises are still widely distributed, they could be a significant part of the feeding base of the species. In 1894, Reiser observed a situation when a mule shoulder was raised and dropped on the crags.

The menu of the Bearded vulture consists of bones (up to 85% of the food)), rather big bones and meat of dead animals (del Hoyo, 1994). The bird breaks the big bones to small pieces that it could eat, flying off with the bone and dropping it on special cliff slopes. The small animals (birds and rodents) are given to the youngsters and represent a significant part of their food.

In the Pyrenees, 88% of the prey objects are mammals, mainly domestic ungulates (sheep or goat limbs), chamois (*Rupicapra rupicapra)* and marmots (*Marmotta marmotta)*, 7% birds and 0.7% reptiles (n=152 objects of prey) (Heredia, 1990). A recent research of a youngster still in nest in the Spanish Pyrenees, showed that 59% of the objects of prey are sheep or goats, 25% rabbits, 3% wild boars, 3% cows/horses, 1.6% dogs and 1.6% foxes (n=78 objects of prey) (Margalida *et al*., in prep).

In Corsica, the menu consists mainly of limbs of domestic ungulates (36% sheep and goats, 33% cattle, mainly calves), pigs (domestic and wild)(16%), mouflons (12%); birds and reptiles rarely occur in the menu (Thibault *et al.* 1993). It seems that the nesting results of Corsica depend on the particular stockbreeding activities, as the main food sources are seasonally moving herds of goats and free-roaming cattle.

In the Alps, the main food for the released birds is chamois and sheep.

Artificial feeding.

The Bearded vulture takes well the method of artificial feeding. 17 different specimens visited a feeding platform for a day (Heredia 1991). The artificial feeding is main method in the reintroduction and the support to the populations in critical status. Anyway, this is not a sustainable method and it should be used as a temporary measure only.

Requirements of the habitat

The Bearded vulture forages in regions with alpine and sub-alpine vegetation, mainly at a height of more than 1000 m, where domestic as well as wild ungulates could be found. In winter and early spring it examines regions with an average altitude and steep cliffs, where there is no snow drifted (Thibault *et al.* 1993). In the Pyrenees, in winter and spring, the bird visits muladares – places near the villages, where carcasses of domestic animals are often deposited.

Movements

Generally, this is a permanently residing species, although in cases of vast areas and presence of youngsters, it could spread over a large territory. Although since late 80s Bearded vultures have been seen more than 100 times beyond the Pyrenees (M. Hernandez, *in litt*. 1997), none of the 33 young birds that have been put wing-tags in the Pyrenees in the period 1987-1996 have been seen among them (R. Antor *in litt*. 1997). The average area of 13 of those young birds was 4,932 (950-10,294) sq.km. (Heredia 1990). So far, adult birds have not been put wing-tags or radio transmitters. In the Alps, 70% of the released birds return to the release site, although there was a bird observed at about 1,300 km from the release region, beyond the Alps.

Conservation statute

The sub-species *Gypaetus barbatus aureus* ranges in Europe and on the Balkan Peninsula. This is a threatened species in Europe. Its population comprises 250 nesting pairs at the most. It has been included into the category SPEC – 3. It has been included into Annex I of the EU Directive on the wild birds as well as in Annex II of the Bern Convention and the Bonn Convention. It has also been included into the Bulgarian Red Data Book, category "extinct species". It has been envisaged for protection under the Biological Diversity Act; protected under the Environment Protection Act. According to the compensation tariff in cases of damages on nature sites (Official Gazette, issue 116/1997), the envisaged compensation amount ranges from 750 to 1000 BGL.

Reasons for the extinction of the species as a nesting one in Bulgaria

- Use of poisons for terrestrial predators control (wolves, jackals)
- Decrease of the extensive stockbreeding
- Loss and degradation of habitats
- Illegal shooting: as harmful game, for private collections or just as an "attractive target"
- Decrease of the natural feeding resources (game stock)
- Disturbance

General decrease and contraction of the population throughout the area.
Heavy metals and chemicals pollution
Lack of nature-conservation culture

Threats (if the species is reintroduced in Bulgaria at present)

- *Poisoning (setting of poisonous baits for terrestrial predators).*

The extinction of the species on the Balkan Peninsula results to a great extent from mass campaigns for poisoning wolves and foxes in the 50s and 60s. Since late 80s, the use of poisonous baits has been prohibited by the Bulgarian legislation. It is also prohibited under many international documents. The latest poisoning of vultures in the Eastern Rhodopes was in 1995, when we found four poisoned Griffon vultures. In 1997 a pair was poisoned in the same region. Although in Bulgaria the use of poisons is prohibited, there is a probable threat of usage of these substances by private farmers and Hunting administrations.

Significance: potentially high with a tendency towards decreasing

- *Chemical pollution*

It relates mostly to the influence of various pesticides and chemical substances over the eggs (shell solidity, embryo status). The effect of this threat has not been studied in Bulgaria. Yet, there are regions with proven contents of chemical elements above the safe norms. That is the situation with the valley of Arda River (the Eastern Rhodopes), where the contents of heavy metals, including cadmium, is many times above the safe norms. So far, there is no evidence of the influence over the Griffon vulture colony there, and it reproduces well. It should be taken into consideration that the heavy metals are stored mostly into the bones, and the Bearded vulture feeds mainly on bones, which may produce negative effect on the species.

Significance: low

- *Lead poisoning*
- The lead poisoning is a possible reason for death in regions of intensive hunting (Heredia and Heredia 1992) and migratory routes. The lead could reach the Bearded vultures via prey food, shot by hunters (wood pigeons, thrushes, etc). But a study carried out in Aragon (Spain) on the chronic exposing to lead of 16 birds (including youngsters, juvenile and adult birds), as well as liver and bones samples from 13 birds, revealed that the lead levels are much lower than those that are indicative for the chronic blood poisoning.
-

Significance: low
Tendency – invariable

- *Illegal shooting*

Till the 80s all raptor birds in Bulgaria have been declared enemies to the "Hunting Administration" and subjected to mass shooting. At present, the Bulgarian legislation prohibits the shooting at raptor birds. Despite all, the heritage is still alive, especially with the old hunters, and they carry on killing raptor birds. Shooting at and possessing stuffed eagle (including all big raptor birds) is a common practice and manifestation of courage and distinguished hunting skills. The fact that most of the possible regions, chosen for future reintroduction, are protected areas or territories visited by a relatively small number of hunters, which facilitates the control and re-education of the latter, is a chance for the Bearded vulture.

Significance: high
Tendency - decreasing

- *Loss and degradation of habitats*
- The risk of progressive development of the mountain regions is one of the main threats for the future of the species. The construction of roads, dams, ski resorts with the concomitant construction of infrastructure as well as increase of the tourists' stream may cause irretrievable loss of habitats.
- In the French part of the Pyrenees, a nesting territory has been abandoned only because of the construction of small hydropower station. Examples for the unscrupulous destruction of habitats are the envisaged construction of a cascade of three dams – "Gorna Arda" in Central and Western Rhodopes, the ski resorts "Syutka" and "Perelik", envisaged for construction in Western Rhodopes, as well as the expansion of the ski complex in Bansko - Pirin mountain.
- The considerable increase of fires during the last years also causes serious damages to the habitats.

- It is worth noting that besides direct chase-away of the species, the destruction of the habitat may produce an indirect effect, such as reduction of its feeding base (chamois, deer, does, tortoises).
-

Significance: average
Tendency - increasing

- *Decrease of the extensive stockbreeding*

Many events such as deprivation of the possibility for migratory breeding of sheep (in winter in Aegean Thrace and in summer – in the mountain regions of the Rhodopes and Balkan Mountains), nationalization of the private property in the 50s, denationalization and dereliction in the 90s, have led to almost complete destroying of the extensive stockbreeding in Bulgaria. Yet, there are regions, mainly in the mountains and the foothills, where the stockbreeding is the major means of living for the local people. These regions are also priority ones for a future reintroduction of the Bearded vulture. The governmental programs, funded substantially by the European Union, for development of stockbreeding exactly in these economically underdeveloped regions, also show great promises.

Significance: high
Tendency – invariable towards decreasing

- *Change in the methods of carcass disposal*

It is related to the orderly incineration system that existed on the territory of the country till 1990. At present, there are only 1 or 2 functioning incinerating furnaces. In spite of all, the carcasses are deposited indiscriminately, at places that are inaccessible for vultures. There is an order of the Ministry of Agriculture and Forests (2000) for construction of carcass-gathering platforms next to every settlement. If this order is put into practice and corresponds to the needs of the vultures, at least in the regions where they are to be found or where there is a chance for them to come back, this would considerably increase the opportunities for successful reintroduction of the Bearded vulture.

Significance: average
Tendency: towards invariability

Decrease of game stock

During the last decade, the poaching on big game as well as the destruction of its habitats have assumed serious proportions. As a result, the game populations of Chamois, Red deer, Fallow deer, Roe deer and Wild boar have suffered considerable decrease.

Significance: high
Tendency – invariability

- *Disturbance*

The Bearded vulture is very sensitive to disturbance. With reference to this, the implementation of out-of-control tourism and mountaineering, as well as hunting battues and military activities and drills, is extremely critical.

Significance: average
Tendency: towards increasing

- *Power-lines*

Significance: low
Tendency – toward increasing

- *Lack of culture*

The lack of elementary environmental culture has been one of the reasons for the extinction of the Bearded vulture. In the recent years, there are many nature-conservation organizations and programs in Bulgaria, which work along these lines, and the change in the people's attitude towards many environmental issues could be easily seen. Another chance is the fact that the Bearded vulture has been declared symbol of the nature conservation in Bulgaria. The "nostalgia" for its extinction is rather strong, which is supposed to evoke a different attitude in its possible reintroduction.

Significance: average

Tendency – towards decreasing

Necessary measures and methods for restoration of the species:

Taking into consideration the biology of the species, characterizing the Bearded vulture as a permanently residing bird, although there are isolated cases of settlement in distant places, we could not rely on natural return of the species to the Balkan Peninsula in the future, in spite of the increasing populations in the Alps and in Spain.

The only opportunity for restoration of the species is its reintroduction.

There is already a considerable experience in the reintroduction of the species, gained in the WE countries, as since 1986 there has been a project for reintroduction of the species into the Alps, and another project for reintroduction of the species in Andalusia and Southern Spain has been launched recently. So far, some 100 birds have been released in the Alps, as 5 nesting pairs have been recorded in 2001. The initiatives for reintroduction of the Bearded vulture are coordinated by "Foundation for the Conservation of the Bearded Vulture".

Reintroduction in Bulgaria:

The strategy for reintroduction of the Bearded vulture in Bulgaria is in conformity with the "IUCN Guidelines for Reintroduction", adopted at the 41st meeting of the Council, May 1995. The Strategy is in pursuance of the "National Strategy for the Conservation of Biodiversity in Bulgaria". The Working Group of the Bearded Vulture is aware of the fact that this is a very long, labor-intensive and expensive process, for the implementation of which the joint efforts of all relevant state and non-governmental institutions will be needed. Taking into consideration all risks of an initiative of this kind, and using the diverse experience of many European specialists, we reached the conclusion that the reintroduction of the Bearded vulture in Bulgaria is possible.

Criteria for reintroduction

For the identification of the priority regions for reintroduction of the Bearded vulture, several criteria have been taken into consideration.

1. Distribution of the species and density of the population in the past.
2. Feeding base available at present and relevant tendencies.
3. Availability of stable population of Golden eagle and distribution of the other vulture birds species as well as status of the wolf population.
4. Possible limiting factors at present.
5. Availability of state and non-governmental structures (Nature, National parks, Protected Areas and nature-conservation organizations), willing to and disposing of the needed potential for implementation of practical activities for bringing back to the wild and taking follow-up care of birds.

Priority regions for reintroduction:

We consider the regions of Western Rhodopes, Eastern Balkan Mountains, Pirin and Eastern Rhodopes to be the most suitable for launching the program for reintroduction. That's why we submit these regions to assessment, as we have taken into consideration the assessment criteria as well as the threats.

Western Rhodopes:

There is a well-preserved extensive stockbreeding in the region. There are suitable nesting areas. In the past, the species was widely spread. At present, the region is often visited by other vulture bird species. There is also a population of Golden eagle, with relatively high density. Its designation as a Nature park is due in the nearest future. Several non-governmental organizations work actively in the region. The main threat is destruction of habitats (realization of large-scale infrastructure projects for building ski-tracks, winter resorts in wild forest regions, dam cascades, quarry activities). The rest of the threats (use of poison baits, illegal shooting, decrease of the feeding base, etc.) are of average significance.

Eastern Balkan Mountains:

On the background of the overall situation regarding the stockbreeding in the country, the region is notable for its comparatively well-preserved extensive stockbreeding (approximately like the stockbreeding in the Eastern Rhodopes, where there are stable populations of Griffon and Egyptian vultures). In the past, the Bearded vulture was a widely distributed bird; that is where the latest data for breeding of the species comes from. There are suitable nesting habitats. Vagrant Griffon vultures are also to be found in this region (information by word of mouth – Green Balkans, Emiliyan Stoynov), nesting Egyptian vulture as well as several observations of Black vulture (Emiliyan Stoynov). The population of the Golden eagle is stable. There is a state structure, represented by "Sinite Kamani" Nature Park (but not throughout the area), as well as non-governmental nature-conservation organizations. The main threats are related to the disturbance caused by the increasing out-of-control tourism and mountaineering. The rest of the threats are of moderate importance.

Pirin:

The species was to be found here in the past. The extensive stockbreeding is decreased to a great extent. In comparison with the other regions, there are more chamois, but anyway, in case of future reintroduction a considerable artificial feeding would be needed. Vagrant Griffon vultures visit this region. The Golden eagle is a nesting species. There is a very good nesting base available. Another advantage is the proximity with Macedonia and the continental part of Greece, where there are still wild birds preserved, and probably a breeding pair. There are good institutional preconditions, a state structure represented by "Pirin National Park", as well as active nature-conservation organizations. The actual threats are the out-of-control tourism and mountaineering, disturbing the habitats as a result of the building of new ski-tracks and facilities. The rest of the threats correspond to the importance defined in the chapter "Threats".

Eastern Rhodopes.

Several observations, mainly of young birds (the last one was in 1999 – E.Stoynov) have been recorded in this area for the last few years. In the past the species was distributed in this area. There is a relatively well developed extensive stockbreeding. The only nesting colonies of Griffon vultures known in Bulgaria, as well as the highest density of the population of Egyptian vulture, are to be found here. The Black vulture is permanently available and partially nesting species in the region. Another species that could be found as a nesting one is the Golden eagle. As the Bearded vulture is mainly an Alpine species, the Eastern Rhodopes region is not very suitable for nesting of the species. There is no nature or national park in the region, but there are many active non-governmental structures, particularly the Bulgarian Society for Protection of Birds and

Green Balkans. The threats are related mainly to the destruction of habitats (quarry activities, unscrupulous felling and burning down of forests). Nobody could tell what the influence of the dense concentration of heavy metals over the Bearded vulture would be.

Other potentially suitable regions are the Central and Western Balkan Mountains, Rila, Osogovo and Slavyanka, but at this stage they do not meet some of the indicated criteria for reintroduction.

As the period before the reintroduction of the first birds is too long (minimum 6-7 years), it is possible some changes to occur in the priority regions, which would call for their new assessment. Generally, in identifying the priority regions for reintroduction the geographical principle and criteria should be observed.

Implementation of an aviary breeding of the Bearded vulture:

-Providing birds for artificial breeding.

The question where the birds for breeding in Bulgaria should be taken from is very disputable. The most suitable solution is that they should be from the geographical population on the Balkan Peninsula (subspecies Gypaetus barbatus aureus), but unfortunately, this population is almost extinct. There are only 4 pairs on the island of Crete and maybe several in the continental part of Greece and Albania. It is impossible of course, to use these pairs for artificial breeding. There is a similar situation with the European population, which is most likely "contaminated" by the reintroduction of birds. Specialized breeding centers and zoos in Western Europe provide the birds that are used for reintroduction in the regions of the Alps and Andalusia, as their parents are from the overall distribution area of the species. Taking into consideration that it is impossible for the "Foundation on the Bearded Vulture" to provide birds for reintroduction in Bulgaria in the near future, due to the fact that they are intended for projects in the Alps and Andalusia, maybe other sources should be looked for. It is desirable to make genetic examinations of the provided birds and to seek a maximum proximity with the population of the Bearded vulture.

- *Possible areas for raising, breeding and preparing the young birds for reintroduction.*

The most suitable place for raising and breeding of Bearded vulture at present is the Wildlife Rehabilitation and Breeding Center. Among the priorities of the Center are its favorable geographical location, suitable climate and the availability of the best veterinary specialists in Bulgaria. The Center commands the services of a specialized veterinary clinic. The team working in the WRBC has attended a training course at the Bearded Vulture Breeding Center – Vienna, as well as training courses in the hospital in Egina – Greece. WRBC is a part of the international system of rescue centers IWRC.

. The infrastructure and equipment of the Center are to be improved with reference to the implementation of its functions as a "rescue center" under CITES Convention. The six-years' experience of the team in the rehabilitation and breeding of wild animals is also important, as there are already achievements in the breeding of raptor birds (B. bubo; B. rufinus; F.tinunculus). A great advantage is the WRBC network of volunteer collaborators established throughout the country.

Another potential suitable place for raising and breeding of Bearded vulture is the network of zoos. At this stage, the narrow means as well as the lack of clearness and consistency in their future management, do not allow their involvement in a long-term program such as breeding of the Bearded vulture and preparing the youngsters for

reintroduction. The Sofia Zoo is the only one suitable for these functions, but the qualification of the personnel as well as the raising and breeding conditions for birds should be significantly improved. The fact that during the period 1915-1928 a pair bred and successfully raised eight youngsters should also be taken into consideration.

- Methods of reintroduction

The methods for practical release of birds bred in captivity indicate that it is unnecessary to build additional facilities and aviaries in the wild. Before flying off, the youngsters, 2-3 weeks old, are placed in natural caves in the cliffs or similar artificial ones. During this period, the human potential available in the structures implementing the reintroduction is of crucial importance, since many individuals are needed for raising the youngster until it flies off, as well as for the follow-up daily tracking during the first months of its life in the wild. The monitoring should continue in certain regularity afterwards, as this process will last for years.

The birds must be marked, as the most common practice is bleaching the feathers, but setting radio transmitters would be better.

The experience from the project in the Alps shows that for the establishment of a viable population, minimum 100 birds should be released. Only 30 – 40% of the birds reach sexual maturity. The whole process, which is going on at present, lasts for more than 20 years.

The plan of the activities for the implementation of the program indicates that the first 2-3 birds in Bulgaria can be released in 2010. And from 2014 on 4 birds will be released every year. This process could be accelerated and fostered to a great extent if our strategy for reintroduction is an underlying one in the priorities of the Foundation on the Bearded vulture.

Concomitant measures in the implementation of the strategy for reintroduction of the Bearded vulture on governmental and non-governmental levels:

On governmental level

- The normative base existing in the country is good and provides the necessary protection for the species, imposing adequate penalty measures in cases of damages. The quality of the implementation of the normative acts, as well as the control of their implementation by the relevant state institutions should be improved. The international conventions and directives should be observed mainly in the realization of large-scale infrastructure projects, causing significant damages to the habitats of Bearded vulture.

- Adopting the practice of open carcass gathering, mainly in the habitats suitable for vultures, corresponding to all veterinarian requirements throughout the country, would facilitate not only the reintroduction of the Bearded vulture, but would also support the populations of all vulture and raptor birds.

- Prior stimulating of the extensive stockbreeding is of crucial importance for the future existence of all vulture birds in Bulgaria.
- Implementation of concomitant projects for increasing the species of the Bearded vulture's feeding spectrum (a good example is the project for the chamois of Vitosha Nature Park)

Setting the reintroduction of the Bearded vulture as a priority goal as well as its inclusion into the investment programs of the Government.

On non-governmental level

The example of increasing population of Griffon vulture in the Eastern Rhodopes is indicative enough and is an evidence of the skills of the Bulgarian NGOs for coping with a challenge such as the reintroduction of the Bearded vulture.

Increasing the human potential and the professional skills of the nature-conservation organizations.

Preparing the general public for the forthcoming reintroduction of the Bearded vulture via agitation and explanatory campaigns.

Improving the professional skills and qualification of the people involved in the raising, breeding and follow-up reintroduction into the wild of the Bearded vulture.

Funding

A priority goal is the inclusion of the program for reintroduction into the existing European programs, coordinated by the Foundation on the Bearded Vulture.

Partial funding from state funds that would guarantee mainly the commitment of the state for the realization of the program for reintroduction.

Other international funds and corporative sponsors.

Mobilization of the internal resources of NGOs for implementation of concomitant activities related to the Bearded vulture.

TIMETABLE

Terms for implementation of the program for reintroduction of the Bearded vulture

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	**Preparation stage –1997-1998**														
1.1.	Gathering information, training personnel and studying the existing international experience- *completed*														
1.2.	Improving the breeding conditions for the Bearded vulture														
2.	**Implementation of informational and educational campaigns among the people and the relevant institutions**														
3.	**Artificial breeding of the Bearded vulture**														
3.1.	Providing minimum one breeding pair plus non-breeding birds														
3.2.	Adaptation and breeding of pairs														
3.3.	Raising the offspring														
3.4.	Increasing the number of breeding pairs up to four														
3.5.	Research of the possible areas for reintroduction of the Bearded vulture with the support of international specialists - *completed*														
3.6.	Preparation of the chosen area for reintroduction														
4.	**Beginning of the reintroduction**														
4.1.	Release of the first 2-3 birds														
4.2.	Annual release of 3-4 birds														
4.3.	Permanent monitoring and feeding of nested birds as well as implementation of conservation and supporting events														

Budget for implementation of the activities to the program for reintroduction of the Bearded vulture in Bulgaria:

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Data from Egyptian Vultures (*Neophron percnopterus*) Tagged with GPS/GSM Transmitters in Bulgaria

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Abstract: The current publication presents results of the first tracking of three Egyptian Vultures (*Neophron percnopterus*), tagged with GPS/GSM transmitters in Bulgaria in 2008 and 2011. The species is enlisted as 'Endangered' in the Red List of Threatened Species of the IUCN. Birds of various ages – a juvenile, a bird of transitional plumage (subad.), and a mature breeding bird (ad.) were tagged. Data on the movement of Egyptian Vultures on the territory of three continents – Europe, Asia and Africa has been collected. The established positions reveal information on the migratory route of Bulgarian population of the species, the movement of breeding birds in search of food and the vagrancy of young, non-breeding Egyptian Vultures.

Key words: Egyptian Vultures, tracking, GPS/GSM transmitter

Introduction

Egyptian Vulture *(Neophron percnopterus* Linnaeus, 1758) is represented with three sub-species. The population nesting in Bulgaria is referred to *N. p. percnopterus*, also found in Southern Europe, Africa, and Southwestern Asia, reaching Tian-Shan and Pakistan to the East. The species is much smaller and lighter than other vultures (Cramp, Simmons 1980). Its European population is estimated at some 3300-5050 pairs (BirdLife International 2012), but not exceeding 5600 pairs, concentrated in several isolated areas (BirdLife International 2004). On a global scale, the number of Egyptian Vultures are decreasing at high rates almost everywhere (BirdLife International 2007). Egyptian Vulture is enlisted as 'Endangered' (A2bcde+3bcde+4bcde, ver 3.1) in the Red List of the International Union for Conservation of Nature (BirdLife International 2012). The new issue of the Red Data Book of Bulgaria also classifies Egyptian Vulture as 'Endangered' (Kurtev *et al.* 2011).

The species was once wide-spread all over Bulgaria and considered numerous (Patev 1950, Michev 1968, 1985, Simeonov *et al*. 1990). In the beginning of XX century the population of the species reached 300-500 pairs, possibly much more (Kurtev *et al.* 2008). An assessment carried out in the period 1961-1966 reported a decline in the number and distribution of the species, despite discovering a number of new nesting localities (Michev 1968). In 1980 Bulgarian population was estimated at no less than 140-160 pairs. In 1989 the decline continued and the population decreased to 90-100 pairs. The overall decline for the period 1989-2003 is estimated at 35% and in 2003 only 57 breeding pairs were confirmed, mostly located in the Eastern Rhodopes, Provadia-Royak Plateau, Eastern and Western Balkan Mountains, Russenski Lom, Strandzha and Sakar (Kurtev *et al.* 2008). Comparable number of some 70 breeding pairs was also reported by Nankinov *et al.* (2004). In 2006-2007 the overall nesting popu-

lation in the country was reduced to 40-45 pairs (Kurtev *et al.* 2007, 2008). The drastic decline of the number continued afterwards. In 2011 the population was estimated at slightly more than 30 pairs (Angelov 2011), while in 2012 it has already been limited to barely 29 nesting pairs (BSPB 2012).

While the trends and distribution of the national population of Egyptian Vulture are well known, there is very little data on the migration and wintering of the birds of the Bulgarian population. At the start of the present study in 2008, there was information on a juvenile Egyptian Vulture fitted with a satellite transmitter in Bulgaria, which migrated to Africa, wintering in Chad and Nigeria (Meyburg *et al.* 2004). Later, in 2010, yet another juvenile Egyptian Vulture hatched in Bulgaria was tagged with a satellite transmitter which showed that it also wintered in Chad (Angelov 2011). There is data on other birds from the European population known to winter in Africa – to the South of Sahara (Hagemeijer, Blair 1997). Birds tagged with satellite transmitters in Spain, France and Italy have been reported wintering in Mauritania, Mali and parts of Senegal (Benitez *et al.* 2004, Meyburg *et al.* 2004, Ceccolini *et al.* 2009, García-Ripollés *et al.*2010).

The current study was initiated in 2008 in order to fill in the gaps of knowledge considering the movement, migration and vagrancy of Egyptian Vultures from Bulgaria and therefore to collect additional data for undertaking adequate and timely conservation measures for the species.

Materials and Methods

Within the current study, a total of three Egyptian Vultures inhabiting two of the strongholds of the species in Bulgaria – Eastern Rhodopes and Russenski Lom (Kurtev *et al.* 2008) were marked. The three birds were of different ages and different origin.

The first Egyptian Vulture named Milko hatched in 2008 in the area of Russenski Lom Nature Park – Northern Bulgaria was found in distress and sent to the Wildlife Rescue Centre of Green Balkans on 06. 08. 2008 by the staff of the NP Directorate. Following a period of treatment and rehabilitation, in the beginning of October 2008 Milko was released back into the wild from a supplementary vulture feeding site in the area of the Eastern Rhodopes.

The Egyptian Vulture (Mitko) was an adult bird estimated at over-six-year-old.

The third tagged Egyptian Vulture (Mitka) was estimated at approximately 4 year-old.

The two birds were trapped in May 2011 in the area of Eastern Rhodopes, close to the state border with Greece. They were caught using a snap-shut trap (constructed specifically and used by Borislav Borisov), triggered with a remote control (constructed by Dobromir Dobrinov). A carcass of a cow was used as a lure, completely covered by the trap. The trap itself consisted of two carrying arms bearing netting sized 4 x 6 m.

The age of the bird was determined using the description of Egyptian Vultures described by Clark, Schmitt (1998).

GPS/GSM transmitters with solar panels were used for the tagging and tracking of all three vultures described. The devices were set to record exact geographic location, speed and direction of flight, altitude, date and timing of every given position.

Milko was fitted with a prototype transmitter developed by Spanish company EagleEye® and granted by Luis Escribano and Victor García for the aims of the current research. The device registers the location of the bird recording geographic coordinates and sending them using the network of a Spanish mobile operator. The fitting of the transmitter was done using standard 'pack-back' harness (Garcelón 1985) of Teflon.

The other two vultures – Mitko and Mitka were tagged with similar transmitters, developed by the Bulgarian producer Elektroninvest Ltd. The transmitters were fixed to the backs of the birds using thin metal cords, connected with metal bushes at the breasts of the birds. The method was copies by an experimental method introduced by Dr. B. Meyburg.

The visualization and the analysis of the data obtained through the transmitters were done using the ESRI ArcMap software.

Results

The young Egyptian Vulture Milko was observed in the area of the supplementary feeding site the day following his release. The transmitter did not send any information initially so there is no data from the first days of the adaptation of the bird into the wild. The first coordinates the transmitter sent were received on 11. 11. 2008 from an area in Israel, close to the state border with Egypt (Fig. 1). The coordinates revealed a section of the migratory route of Egyptian

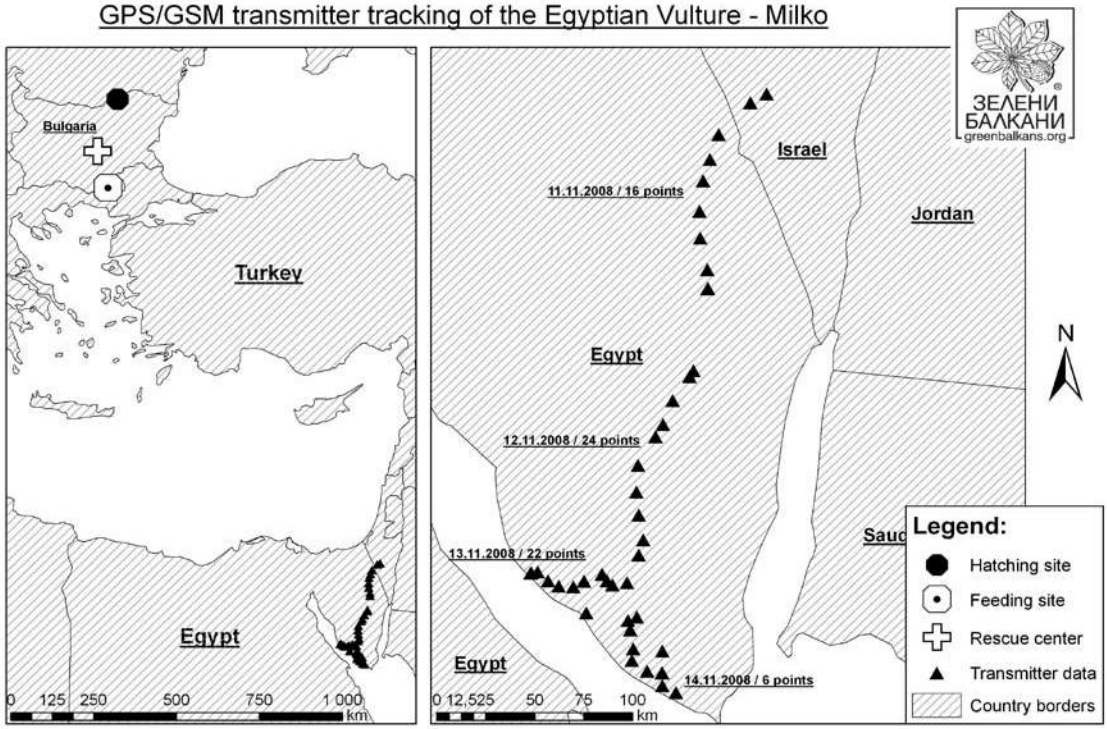

Fig. 1. GPS/GSM transmitter tracking of the Egyptian Vulture – Milko.

Vulture which had headed to Africa. Approximately the same route was identified while tracking two other Egyptian Vultures which migrated from Bulgaria to Africa in 2001 (Meyburg *et al.* 2004) and 2010 (Angelov 2011). Once the vulture reached Egypt and the coast of Red Sea – the Southwestern part of the Sinai Peninsula, Milko remained in the area until 14. 11. 2008, moving along the coast of Red Sea, probably seeking for an opportunity to cross Red Sea and reach the coasts of Africa (Fig. 1). The last signal from the transmitter was received on 14. 11. 2008 and no additional data has been sent by that transmitter since then. The bird had travelled over 1670 km from the release site to the last coordinate sent by the transmitter. The reason for the loss of signal from the transmitter remains unclear. Several hypotheses can be argued – a defect in the device causing the ceasing of its operation; an unsuccessful attempt of the bird to cross Red Sea, etc.

The transmitter of Milko has sent a total of 68 positions with the location of the bird. A total of 36 of them indicate active movement (speed of over 5 km/h); 9 of them indicate poor activity (less than 2 km/h –the bird was possibly flying over very short distances during foraging or at roost) and 23 of the positions indicated rest (no speed reported).

The average speed (Av.Sp1) reported during active movement within the period of operation of the transmitter is 38.65 km/h, while the maximum speed (Max.Sp1) recorded for Milko during active flight reaches 71.34 km/h. The last positions sent by the transmitter on November 14th (n=6), all indicate active flight. The average speed recorded that day (ASld) is 40.5 km/h. This value is higher than the overall average speed recorded during the entire period (Av.Sp1) of normal operation of the transmitter. This fact suggests that the bird was in good condition so a crossing of the Red Sea was potentially possible. The width of the section of Red Sea in the area where the last coordinates were sent is about 30 km from West to East. Such distance should have been no insuperable obstacle for the young vulture. This suggestion is supported by the data of yet another young Egyptian Vulture tagged in FYROM, which had attempted to cross Mediterranean Sea from Peloponnese towards Libya during migration in September. That bird is reported to have covered about 485 km for 16 h, which means an average speed (Asp4) of some 30 km/h, a value much lower than the average speed of Milko (ASld), reported in the last day at the coast of the Red Sea. For a single day the vulture from FYROM flew over 120 km inlands, crossing the Peloponnese from North to South and then continued its flight for 300 km over

Mediterranean Sea before sending its last coordinates from around 75 km on the North of Libyan coast (BSPB 2012a). Considering all of the above, it can be suggested that the transmitter of Milko has possibly shown a defect and this is the most probable reason for ceasing of the transmission.

The results of the second vulture tagged – Mitko, reveal a very different picture. The behaviour of the bird following the days of the tagging showed that it was a part of a breeding pair, nesting some 12.5 km from the supplementary feeding site maintained by Green Balkans. The transmitter of Mitko also does not work well and sent very little data. The information is however enough to confirm that the bird regularly covered the distance of 12.5 km from the nest to the supplementary feeding site in search of food (Fig. 2). In addition to the data sent by the transmitter, there were several visual observations confirming the presence of the bird in the area. Due to the easily identifiable transmitter, Mitko was observed on numerous occasions at the supplementary feeding site, the area of the nest (during the breeding season) and together with a recently fledged young also at the supplementary feeding site at the end of the summer (14. 08. 2011, 08. 09. 2011, 09. 09. 20011, 13. 09. 2011, 14. 09. 2011 – Mitkov, pers. comm; Klisurov, pers comm.). These observations confirm that the tagged vulture together with its mate had successfully raised a single chick, which was also visiting the supplementary feeding site.

The transmitter of Mitko sent a total of 16 positions indicating an average speed (Av.Sp2) of 34 km/h and maximum speed (Max.Sp2) of 35 km/h.

Despite being scarce, these are the first data on tracking of an adult, breeding Egyptian Vulture in the country.

The data received from the transmitter of the third Egyptian Vulture (Mitka) tagged, reveal very interesting details on the sub-adults' behaviour. The day the bird was trapped, it moved to south to the supplementary feeding site in Dadia Forest National Park, Northern Greece. The birds stayed in Greece shortly and then, on 11. 06. 2011 moved to the area of Eastern Balkan Mountains – Royak-Provadia Plateau, where it stayed for several days. Later the vulture returned to the Eastern Rhodopes and Dadia in Greece. The bird repeated these trips among the supplementary feeding sites in Eastern Rhodopes and Dadia and the rock terraces of Royak-Provadia Plateau several times (Fig. 2), also once entering Turkey, close to the state border with Greece. The signals of the transmitter allowed for the identification of a total of three areas, generally preferred by the vulture for longer periods. Two of them

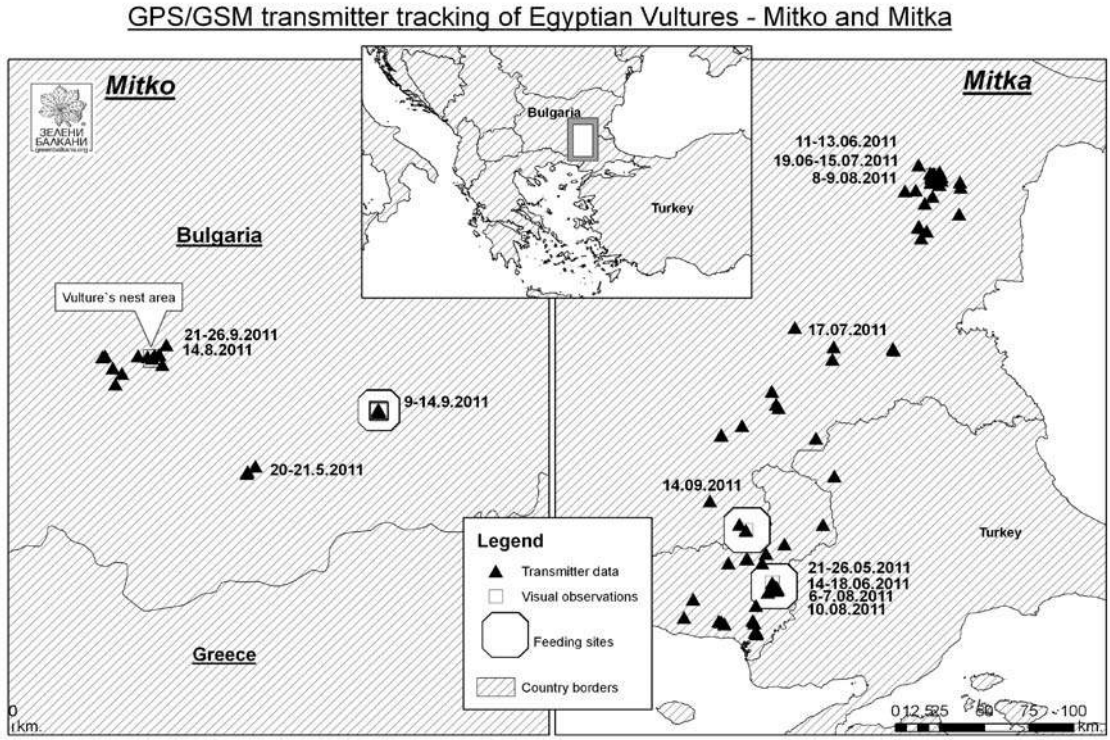

Fig. 2. GPS/GSM transmitter tracking of the Egyptian Vultures – Mitko and Mitka.

were the supplementary feeding sites maintained in the Eastern Rhodopes and Dadia National Park, Northern Greece. There were also additional visual observations of the bird from these two areas (14. 09. 2011 – observed by T. Mitkov, pers.comm. and 15-16. 11. 2011, observed by WWF – Greece – T. Pagnon, P. Babakas, pers. comm.). The rocks of Royak-Provadia Plateau however prove most significant for the bird. The area most frequently visited by the vulture, suggested as its home range, covered some 865 sq km (Fig. 3). There were also visual observations of Mitka in that area – 09. 07. and 15. 07. 2011 and a third observation on 13.07.2011, reported by Vladimir Dobrev and Sanie Mumun (pers. comm). The vulture was observed displaying nesting behaviour together with another Egyptian Vulture at similar age. Both birds were seen entering a rock niche known to have been a historic location of the species until recent years. Their behaviour suggests the formation of a territorial pair despite the birds being non-fully mature.

During its wanderings Mitka covered a total area of 15 603 sq km. The most distant locations sent are found at a distance of 295 km (North to South) and 72 km (East to West). The transmitter of this vulture sent a total of 95 positions for 48 days, 40 of which in state of active movement. The average speed of Mitka (Av.Sp3) is 42.8 km/h, at a maximum speed (Max.Sp3) of 75 km/h.

Conclusions

The data received from Egyptian Vulture Milka, as well as the behaviour of the bird confirm that the vulture has been successfully rehabilitated in Wildlife Rescue Centre of Green Balkans and is following already existing migratory routes.

The data collected on the migration of this Egyptian Vulture confirms the existing information that birds from Bulgarian population of the species migrate towards Africa, following Eastern Mediterranean coast and crossing the territories of Israel and Egypt.

The data collected by the transmitter of the second vulture – Mitko, reveal that Egyptian Vultures in Bulgaria can regularly fly over 12 km from the nest in search of food during the breeding season. This data should be taken into consideration when processing various threatening investment intentions in areas where the species is known to nest.

The observations of a young bird together with a tagged adult suggest that the transmitter has no significant negative impact on the adult bird during raising of their offspring.

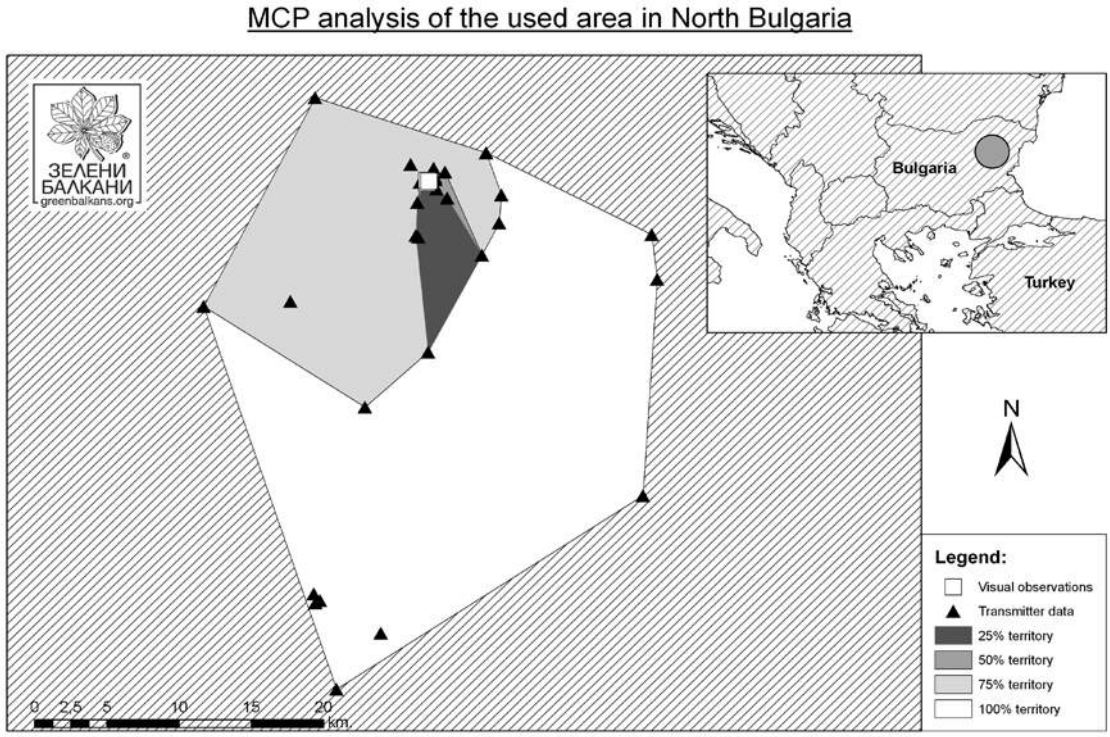

Fig. 3. MCP analysis of the used area in North Bulgaria.

The behaviour shown by the third bird tagged suggests that the formation of territorial pairs and taking of a nesting area in Egyptian Vultures can occur before reaching full maturity. In addition, it is clear that during the vagrant period, immature Egyptian Vultures fly over areas of over several hundred square kilometers in search of suitable nesting habitats.

The data from the transmitter as well as the numerous observations confirm that Egyptian Vultures readily visit supplementary feeding sites where available. This requires the establishment of new feeding sites especially at sites where the species is known to have been nesting in the past.

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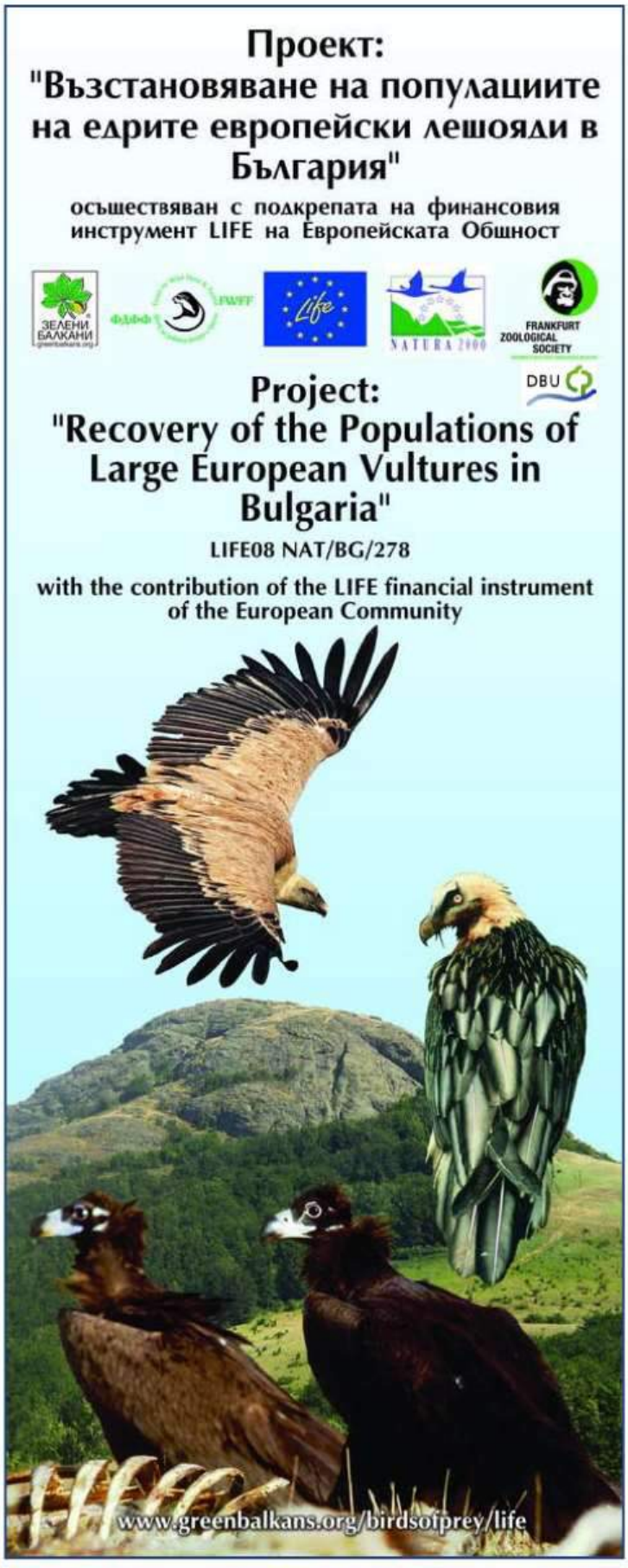
Informations- und Werbematerial

Projektbanner



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Изказваме огромни благодарности към съорганизатори[illegible]
фестивал:
Г-н Ял Ван Беелен (GoKotel) и Община Котел.

ТОЗИ ФЕСТИВАЛ СЕ ПРОВЕЖДА В ПАМЕТ НА НАШИЯ ПР[illegible]
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Какво е подвижно овчарство? [illegible]

Защо се практикува? [illegible]

Кой го практикува? [illegible]

Какво е ФДФФ? [illegible]

Каква е връзката на подвижното овчарство с екологията? [illegible]

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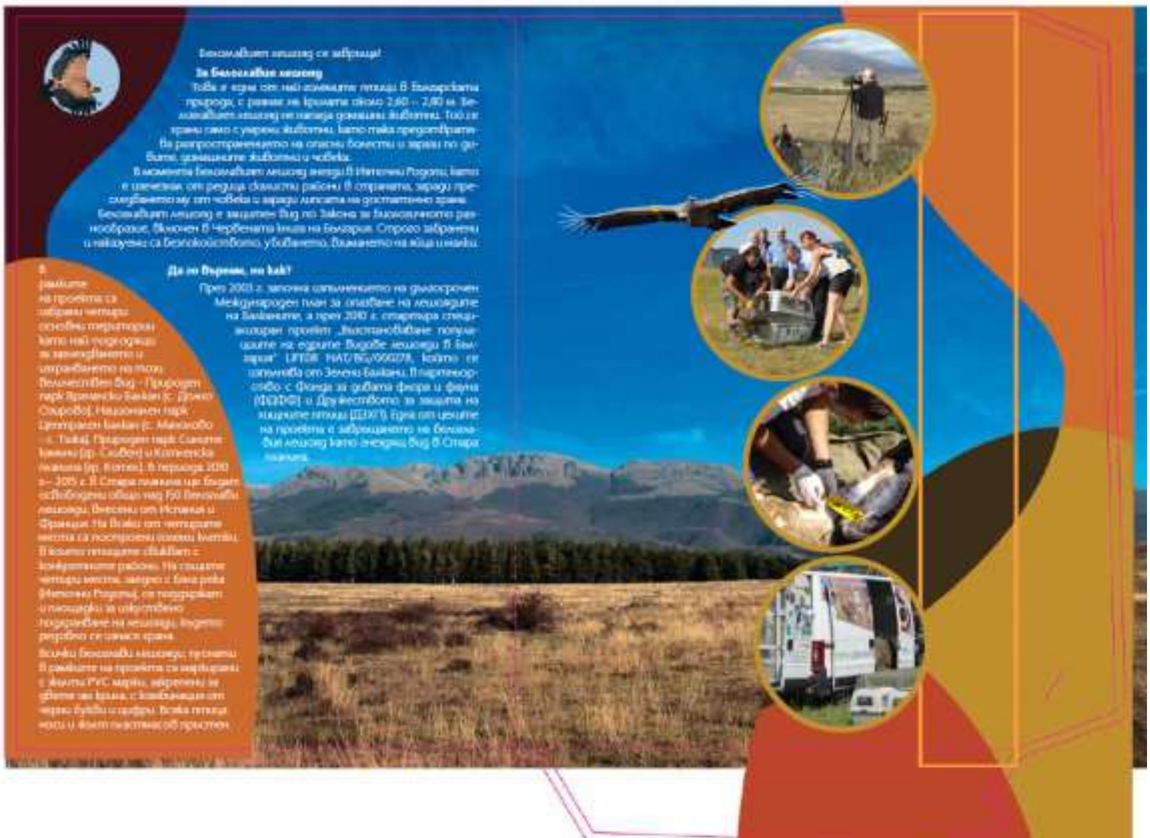
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